# CHINA
# ECONOMIC OVERVIEW
## A BRITISH COLUMBIA PERSPECTIVE

Province of British Columbia

Ministry of International Trade and Investment

The Honourable Patrick L. McGeer, Minister

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# INTRODUCTION

This report provides an overview of recent developments in China's economic and business environment. Its purpose is to assist Canadian companies in the processes of product definition, and market entry.

Since China's Open Door Policy began in 1979, the country has emerged as a strong participant in international trade. Foreign business activity with China has been steadily increasing. In 1983, the total volume of Chinese trade was U.S. $40.7 billion, almost double that of 1978. The country is now Japan's third largest export market and Canada's second largest trade partner within the Pacific Rim. Its vast resource base, huge, low cost labour force, and viable economic program are factors which are expected to contribute to even stronger performance over the next decade.

China is now preparing to implement its Seventh Five-Year Plan. Over the period 1986-90, the State will conduct a two-fold development strategy, which will concentrate resources on building up basic industries - energy, transportation and communications. At the same time, it will upgrade the technical level of existing key enterprises. This development plan will provide the main opportunities for overseas trade and investment over the next five years.

Since the Open Door Policy began, complexities in China's business environment have significantly diminished. Steady exposure to high levels of business activity with Western partners has liberalized many aspects of the communications/negotiations process. This has served to decrease market entry costs for foreign firms and helped clarify China's demand for foreign products and expertise.

Canadian firms seeking to expand their business activity beyond North American markets would do well to consider trading with China. For many firms, this market represents as much in sales potential as the whole of North America. The country has a strong role within the Pacific Rim, a region which has become increasingly significant in global trade. Indeed, business prospects in many regions of the world are not as bright as in Southeast Asia, where import demand is expected to remain strong well into the next decade.

## SINO-CANADIAN RELATIONS

Canada's establishment of diplomatic relations with the People's Republic of China in 1970, our part in the assumption by Beijing of China's seat in the United Nations, and the vigorous program of exchanges carried out over the past several years, have all contributed to China's emergence from its earlier isolation.

An important continuing link has been Dr. Norman Bethune, who provided crucial medical services to the Chinese Eighth Route Army in the war with Japan. He died in 1939 after contracting blood poisoning. Mao Tse Tung's subsequent tribute became one of three most commonly read articles in China during the Cultural Revolution, in the process establishing Dr. Bethune's historical prominence. In 1979, ceremonies were held in Canada and China to mark the fortieth anniversary of his death. As his homeland, Canada's legacy has been a fund of goodwill in China.

Although Canada no longer enjoys the special position which immediately followed our recognition of China in 1970, Canada continues to be a country on which China focuses much attention. Since 1970, Canada has made supportive efforts toward bringing China into full participation in the international community. In affirmation of this contribution are recent Chinese statements on the value of Sino-Canadian relations as a model of developed/developing country relationships.

A consistent exchange of high level visitors has taken place since 1970, involving such areas as the arts, science and technology, education, medicine, sports, the media, and tourism. A family reunification program was begun in 1973 through which some 26,000 Chinese had immigrated to join their relatives by 1982. Some 800 Chinese students are also currently studying in Canada, about half of them under an officially funded education arrangement concluded in 1979. Prospects for future cooperation in trade, political, cultural, and other fields are promising, as both sides work to expand relations on the basis of mutual respect and benefit.

### Science and Technology

Significant advances have been made in scientific and technological cooperation with the PRC. Canadian scientific and technological missions have covered forestry, geology, fisheries, seismology, meteorology, economics, oceanography, and veterinary medicine. Chinese delegations to Canada have covered such fields as petroleum, seismology, surface coal mining, laser research, forestry, fisheries, permafrost, biological insect control, surveying and mapping, and engineering. Increasingly, exchanges are being arranged between participating institutions rather than exclusively through official government channels. There are now special Memoranda of Understanding in the fields of agriculture and forestry.

## Education

In September 1973, a bilateral agreement was reached providing for the creation of an academic exchange program. Since then, more than a hundred and fifty Canadian students have studied for two-year terms in China and a larger number of Chinese students have studied English or French in Canada. Reciprocal exchanges of university professors have taken place, and for the past several years, Canadian teachers of English and French as a second language have worked on short-term assignments in China.

Due to China's growing emphasis on developing science and technology, the country has sent abroad large numbers of students, researchers, teachers, and managers. In June 1979, an arrangement was reached with the Chinese Ministry of Education for the placing of Chinese in Canadian universities. In the four years after the signing of this agreement, Canadian institutions received over 1300 scholars and students from China.

## Medicine

Under the Bethune Medical Exchange, founded in 1973, Chinese doctors have studied, among other areas, neurophysiology, urology, and organ transplantation in Canada, while Canadian doctors have studied acupuncture techniques in China. In 1982, areas of bilateral cooperation in the medical field were identified and an agreement signed which supports a training arrangement between the University of Toronto and the Sichuan Medical College.

## Culture and Sports

Culture and sports have also been key parts of the large Canada-Chinese exchange programme. Sports exchanges have included competitions in Canada and China by athletes in table tennis, badminton, basketball, swimming, gymnastics, volleyball, hockey, speedskating and water-skiing.

China's contributions to the cultural exchange programme were crowned by the Exhibition of Archaeological Finds of the People's Republic of China at the Royal Ontario Museum in Toronto from August to November, 1974, and by the exhibition of ancient scientific inventions at the Ontario Science Centre in 1982. The 150-member Shanghai Ballet made a highly successful visit to Canada on its first tour of the West; in 1979 the Peking Opera troupe played to packed houses across the country, as did the Wuhan Circus in 1982.

Canadian culture has also received commendable exposure in China, ranging from exhibitions of Eskimo art, landscape paintings and photography to performances by the Toronto Symphony Orchestra in Beijing, Shanghai and Guangzhou, a successful tour by the Canadian Brass Quintet, workshops given by noted Canadian dancers Celia Franca, Karen Kain and Frank Augustyn, and appearances by opera star Maureen Forrester and pianist Louis Lortie.

## Commercial Relations

Since diplomatic relations were established in 1970, Sino-Canadian economic cooperation has expanded considerably. Under a trade agreement signed in 1973, Canada and China granted each other Most Favoured Nation Trading status. This agreement has been renewed in 1977, 1979 and 1982. An Economic Cooperation Protocol governing increased bilateral activity in a number of sectors was signed in 1979 as an addendum to the trade agreement. Commercial relations with China are facilitated by the annual Canada/China Joint Trade Committee which meets alternately in Ottawa and Beijing.

China is Canada's second largest Pacific Rim market and holds immense opportunity for Canadian exporters. Two-way trade has increased 11-fold since 1970 and, as China steps up its imports, should continue to grow. Trade between the two countries grew substantially throughout the 1970's, beginning with large sales of Canadian wheat to China. (Canada's primary export to China has historically been wheat, and this remains true today). Non-wheat items represent, however, an increasing proportion of sales, and are now worth almost three-quarters of a billion dollars annually.

Of the non-wheat trade, raw materials (minerals and metals) and services (import traders) are the longest established. While manufactured goods and services (such as management consulting and engineering) are relatively new, there are currently higher levels of cooperation in these areas. Near-term opportunities for manufacturers and consultants have increased significantly due to improvements in Beijing's fiscal position as well as development plans for 1985-90, which emphasize infrastructure improvements, i.e. energy, transport, communications and natural resource exploration.

Prospective export sales to China are influenced by the continuing imbalance of trade in Canada's favour. The Chinese attach special importance to a bilateral balance even when reminded from time to time that Canada is a market of only 25 million people. The imbalance has been mainly due to large wheat sales. In the past year, these have fallen off significantly because of increased production in China, and have been replaced in part by sales of a number of manufactured end products. China's sales to Canada have also risen significantly; nevertheless, a 3:1 ratio in Canada's favour persists.

China is seeking to rectify the bilateral imbalance by increasing sales to Canada, rather than restricting the importation of Canadian goods. Textiles and garments account for one-half of present Chinese exports to Canada. Understandably there is concern over any increase in quotas. China is one of 18 low wage countries that has negotiated "voluntary" export restraints with Canada to limit exports of certain clothing and textiles. If Canada were to erect new barriers to Chinese goods, reciprocal treatment could be anticipated, particulary in a sector such as forest products, where competition is stiff.

Future opportunities for economic cooperation in general however, remain promising. There is a similarity to many Canadian and Chinese development problems, which means Canadian technology can be applicable to China in sectors such as light aviation, oil/gas transmission, and hydropower. During his visit in 1984 Chinese Premier Zhao Ziyang emphasized energy, transport, communications, and selective industrial upgrading as major sectors of development over the next decade and as areas where Canadian strengths were well-known. Canada is offering not only equipment but technology transfer and training programs as an integrated package. He praised Canada's position with respect to technology transfer.

China is considering investing in Canadian resource industries in order to secure stable, long-term access to natural resource supplies and foreign expertise. Areas currently under examination include woodpulp, potash, timber, sulphur, copper and cobalt.

To assist China in expanding its sales, Canada has provided marketing advice and supported the opening of a Chinese Consulate-General in Toronto. A large exhibit of Chinese products also took place in Alberta in 1984. Future efforts could include closer cooperation between Chinese foreign trade organizations and Canadian importers, and well-coordinated efforts by the Commercial Section of the Chinese Embassy in Canada and the Canada-China Trade Council.

Ministerial visits are part of an ongoing program of developing cooperation with China and will continue in a number of fields. On the Chinese side, a number of Ministers and Vice-Ministers have visited Canada, including Mr. Huang Hu as Foreign Minister in 1977, the Minister of Foreign Trade, Mr. Li Ziang, in October 1979, Vice-Premier Bo Yibo in 1980, Mr. Wu Xueqian, State Councillor and Minister of Foreign Affairs, in 1983, Chinese Premier Zhao Ziyang in 1984; and President Li Xiannen in 1985.

Private sector initiatives, in conjunction with ministerial level missions and other government supported activities, are part of a continuing effort to expand the commercial relationship between Canada and China. For example, the Canada-China Trade Council, founded in 1978, is a private organization which assists Canadian exporters and importers in doing business in China.

## The Canadian International Development Agency

Aid by the Canadian International Development Agency (CIDA) to China began in the winter of 1981-82 with the donation of $4 million worth of wheat to the relief of flood and drought-stricken areas of Hubei and Hebei provinces. Since that time, the Agency has negotiated a full program of development assistance concentrating on agriculture, forestry, energy and human resources.

CIDA is currently funding two substantial projects in China. The first program is designed to help China improv production capacity and capability through the transfer o appropriate Canadian technology. It is hoped that, as a resul of better quality and lower production costs, Chinese products will become more competitive in global markets.

The thrust of the second program is the provision of professional and technical training in Canadian and Chinese universities for Chinese managers, engineers, and other professionals.

Both projects emphasize human resource development - a key factor in the economic growth of many Third World countries. China has particularly pressing needs in the areas of business management. As the country modernizes, China feels that 5 percent of the population (or 50 million people) will need to be trained as managers. The World University Service, through a grant from CIDA, is bringing 300 Chinese middle managers to Canada for training.

## The Export Development Corporation (EDC)

The Export Development Corporation is a Canadian Crown Corporation that provides a wide range of insurance and bank-guarantee services to Canadian exporters and arranges credits for foreign buyers in order to facilitate export trade. In 1979 the EDC established a $2.3 billion line of credit to finance China's purchases of Canadian services and equipment. This line of credit was renewed for four more years under a General Financing Protocol signed with the Bank of China on October 1, 1984. Under the protocol, export financing is available in the form of both buyers' and suppliers' credit.

Utilization of the EDC line of credit has been modest. Canada reminds China on a frequent basis to take greater advantage of it.

Under the bilateral Foreign Investment Insurance Agreement concluded between EDC and China in 1984, the Foreign Investment Insurance Program is also available for the China market through the EDC.

## SINO-BRITISH COLUMBIA RELATIONS

British Columbia is the gateway to the Pacific and has links with China going back many years. Those links continue today with renewed strength.

Many of British Columbia's citizens have their roots in China. These citizens make a very substantial contribution to the economy and cultural life of our province and Canada as a whole.

The Province of British Columbia hosted Premier Zhao Ziyang during his visit to Canada in January 1984. In May 1984, Premier Bennett visited China. In July 1985, Chinese President Li Xiannian visited British Columbia. During Expo year many delegations and senior officials from China are expected.

The British Columbia-People's Republic of China Scholar Exchange Program was initiated three years ago. Faculty members on sabbatical leave travel to China to lecture in the fields of education, science, and technology. The program has resulted in the visit to China of 30 British Columbia scholars of various specialties including medicine, metallurgical engineering, and English language training. Twenty-five Chinese scholars have made reciprocal visits to British Columbia universities. The technological fields are the major areas of study. In addition to the Exchange Program, all the British Columbia universities and a number of faculties have established ties with counterparts in China.

### Expo

China will participate in the 1986 World Exposition (EXPO) in Vancouver, scheduled to be held from May 2 to October 13, 1986. British Columbia welcomes its participation, as an important addition to this major international show. The nature of China's exhibit is not yet known but will likely extend from historical achievements to future plans for transportation and communication.

### Sino-British Columbia Commercial Relations

In 1975, British Columbia's exports to China totalled $23,084,512. Of this, the dominant export was pulp, followed by lead, seeds, and hides. By 1978, the province's exports to China had expanded considerably, both in terms of volume and product categories. Aluminum dominated exports with sales valued at $27.6 million, followed by wood pulp ($16.5 million), wheat, ($1.03 million), fertilizer, linerboard and zinc. The number of product categories greatly expanded to include products such as high technology equipment, telegraph apparatus equipment and parts, and communications equipment.

Since 1978, trade has continued this steady expansion, with resource products dominating B.C.'s exports to China. In 1984, sales of woodpulp were valued at $56.2 million, aluminum exports totalled $70.5 million, lumber exports, $34.0 million, and raw log sales, $57.1 million. Other major B.C. exports to China include zinc, wheat, copper, linerboard, wrap paper, and coal.

Areas of future emphasis for B.C.-China trade are related to China's continued need for stable resource supplies and the country's more recent demand for technology transfer. In the near future, B.C. sales to China of raw materials and resources are expected to sustain current levels and/or continue their steady expansion.

It is expected that British Columbia will continue to contribute to China's long-term development plans. The province's expertise in hydro-power development, mineral and forest resource extraction are well-suited to China's needs. New gains are expected now that interest is focusing more on alternate mechanisms for economic cooperation such as joint venture operations in both Canada and China, co-production projects, and countertrade.

In the high technology sector, areas in which B.C. can make significant contributions are telecommunications and computer software.

Key to the success of B.C. business initiatives in China has been strong government support at both the Federal and Provincial levels. Bilateral trade could be further enhanced by initiatives that served to increase Chinese product sales in Canada. Assistance to China's Foreign Trade Corporations here in Canada in the areas of product promotion, marketing, and distribution, as well as a greater emphasis on the role of Canada's trading houses in export activities could warranted.

## ESTIMATED BRITISH COLUMBIA EXPORTS TO CHINA

| | $ Millions | |
|---|---|---|
| | **1984** | **1983** |
| Aluminum | 70.5 | 50.8 |
| Logs | 57.1 | 32.5 |
| Wood pulp and similar pulp | 56.2 | 72.0 |
| Copper in ores, concentrates and matte | 37.3 | 4.1 |
| Lumber | 34.0 | 39.6 |
| Zinc blocks, pigs and slabs | 20.1 | 19.9 |
| Paper and paper board | 15.1 | 4.1 |
| Red spring wheat excluding seed | 8.0 | 5.8 |
| Gold in ores and concentrates | 6.4 | -- |
| Contractors equipment and tools | 5.5 | -- |
| Other | 3.7 | 3.1 |
| Total | 313.9 | 231.9 |

## CANADIAN IMPORTS FROM CHINA

| | $ Millions | |
|---|---|---|
| | **1985** | **1984** |
| Outerwear, except knitted | 78.3 | 80.9 |
| Other apparel and apparel accessories | 46.3 | 29.2 |
| Outerwear, knitted | 34.6 | 40.3 |
| House furnishings | 27.1 | 28.4 |
| Broadwoven fabrics, cotton | 25.7 | 19.5 |
| Other vegetable and vegetable preparations | 24.7 | 17.4 |
| Broadwoven fabrics, mixed fibres | 22.9 | 18.6 |
| Games, toys and children's vehicles | 17.7 | 1.7 |
| Nuts, except oil nuts | 13.7 | 10.7 |
| Other end products, inedible | 8.6 | 3.6 |
| Other | 103.9 | 83.2 |
| Total | 403.5 | 333.5 |

## CANADIAN EXPORTS TO CHINA

| | $ Millions | |
|---|---|---|
| | **1985** | **1984** |
| Wheat | 445.6 | 602.2 |
| Newsprint | 98.7 | 26.2 |
| Aluminum, including alloys | 98.5 | 70.5 |
| Wood pulp and similar pulp | 66.0 | 64.5 |
| Synthetic rubber/plastic materials | 65.4 | 23.8 |
| Zinc, including alloys | 46.5 | 47.7 |
| Copper and alloys | 40.9 | 67.6 |
| Fertilizer and fertilizer materials | 38.5 | 93.1 |
| Sulpher | 30.0 | 28.1 |
| Lumber, softwood | 29.7 | 32.5 |
| Other | 299.5 | 180.3 |
| Total | 1,259.3 | 1,236.5 |

Source: Statistics Canada.

## CHINA'S FOREIGN TRADE

Since the founding of the Republic in 1949, China's foreign trade has expanded rapidly. Over the period 1949-79, two-way trade rose at an annual rate of 12.8 percent per year in constant prices, a rate higher than the growth rate of China's national product. In the same period industrial and agricultural output valued in constant prices increased 9 percent per year.

The foreign trade share of China's G.N.P. is low, hovering between 4 and 8 percent, whereas for the U.S. it has been 10-15 percent and for the U.K. 30-40 percent. Until 1979, the total value of China's exports accounted for only 0.8 percent of the world's exports. Trade has, nonetheless, played a significant role in maintaining economic growth and balancing the economy. Under the system of centralized planning, imports supplied gaps in domestic production and exports, while not viewed as an instrument to promote economic growth, provided needed foreign exchange to pay for imports. Until the Open Door Policy in 1979, foreign trade satisfied China's most pressing needs, thus maintaining a satisfactory rate of economic growth during periods of crisis.

Through the planned pricing policy, China's domestic price structure was insulated from world prices. Protectionist barriers allowed import substitution to progress despite comparative disadvantages. Today China is wrestling with problems related to adjustment within the world market, and is having to reconsider domestic pricing policies with a view to orienting industrial development to trends in world demand.

China's attitude toward the role of external trade and capital in economic development became positive in the early 1970's. The State accorded exports high priority and permitted selected foreign investment and financial inflows. Foreign exchange constraints eased significantly during this period due to improved political relations with some East Bloc countries, the emergence of a surplus of crude oil, and the growing export capability of China's domestic industries. In response, the country's trade grew significantly, nearly tripling over the period 1975-81.

Greater participation in the world community paralleled the increased trade volume. In 1972 China's relations with the U.S. and Japan were normalized. In 1979 China announced the Open Door Policy under which the State further opened the country to international trade and investment. In April 1980 China was admitted to the International Monetary Fund and the World Bank (International Bank for Reconstruction and Development). The following year the World Bank announced a $200 million loan to China to finance science and engineering training at 26 Chinese universities, as well as the purchase of advanced scientific research and equipment.

China's world economic and trade relations have considerably expanded. The country has established trade relations with 174 countries and regions, of which over 70 have signed bilateral agreements with China. (Canada-China economic relations have flourished since 1970. Trade increased over eleven times between then and 1983; from $160 million to $1.8 billion.) In addition, China has signed several trade pacts with the European Economic Community. Thus, foreign economic relations developed steadily and rapidly, contributing significantly to the economy's overall development.

China's trade over the past five years has grown very rapidly. The total value of two-way trade in 1979 alone increased 23 percent in real terms over 1978. In 1981, despite world recession, exports grew by 14 percent. By 1983 the country had built up an almost embarrassingly large balance of payments surplus. In that year, while exports still amounted to only 8.3 percent of GNP and imports only 7.0 percent of GNP, the total volume of two-way trade was US $40.7 billion, almost double that of 1978. Export increases pushed China from 32nd to 16th among the world's exporters. With the exception of 1983, however, the country's trading practices have resulted in a fairly balanced overall international trade.

While the traditionally conservative trade policy is not expected to alter, a significant change in trade relations is taking place. This is evident in China's Development Plan for 1981-85 in which the built-in deficit, though relatively small, allows for imports to rise faster than exports. There has also been a definite attempt to adjust the mix of exports: the proportion of agricultural products in exports has steadily declined, while that of industrial products has steadily increased. China has recognized that only by producing low-priced, high quality goods can it significantly expand exports. This recognition is a major force behind the modernization drive and the move to establish Western contacts.

## Trade Commodity Mix

Imports: Before 1949, China's foreign trade pattern was similar to that of underdeveloped countries in the 19th century. It exported raw materials and imported consumer and capital goods.

After 1949, except for necessities such as food grains, imports of consumer goods were drastically cut. Most of the scarce foreign exchange available was used to import producer goods for reconstruction in industry and transportation. In 1950/51 imports of producer goods (machinery and equipment as well as raw materials) already accounted for 85 percent of the total, and imports of consumer goods only 15 percent.

In the 1950's China made great strides in industrialization and agricultural development. The import of large amounts of machinery and equipment from the USSR under a loan program raised the percentage of producer goods imports to about 93 percent during 1953-57.

In the 1960's China's import commodity pattern underwent profound changes. In agriculture, the disturbance of the Great Leap Forward in the 1950's, bad weather, and errors in economic planning and management set the stage for an acute agricultural crisis in the early 1960's. Thus, between 1961 and 1966, China imported 4.5 to 6.5 million tons of grain. This declined gradually to 3 to 5 million tons around the end of the 1960's. To step up agricultural production after the food crisis, imports of chemical fertilizers increased sharply from about 1 million tons in the early 1960's to more than 2 million tons in the early 1970's.

The rapid build-up of industrial capacity in the 1950's and 1960's considerably increased China's ability to produce machinery and other manufactured goods. This, together with the end of the delivery of Soviet-financed equipment, reduced China's imports of machinery and equipment but increased import requirements for intermediate goods, particularily high quality iron and steel materials, nonferrous metals, and raw materials. Thus, import substitution progressed from consumer goods to capital goods.

In the 1970's China's planners pursued import substitution further, with a focus on intermediate goods, especially steel, chemical fertilizers, and synthetic fibers, manufacturing industries and agriculture. They turned to Western countries and Japan for equipment and modern technology, which involved importing whole plants. Sixty whole-plant contracts with a total value of $2.6 billion were signed, involving the fertilizer, petrochemical, chemical and steel industries.

Significant to China's export/import trade in the 1970's is the fact that the country became a net exporter of petroleum in 1972. Previously, China relied on the USSR and Romania for petroleum imports, which absorbed about 10 percent of export earnings.

Under the modernization drive of the new political leadership after 1977, contracts for whole plants and technology imports surged again. In 1978/79 they amounted to about $8.5 billion.

By 1980-81 a readjustment policy adopted in mid-1979 had reduced whole plant imports. China had decided to cancel or postpone a large number of import contracts, including some steel, petrochemical, chemical and mining projects. At this time the emphasis changed from importing complete plants to importing selected machinery and equipment.

As of 1979, minerals and metals were major import items followed by machinery and equipment. Cereals were traditionally China's second largest import item and accounted for about 11% of total imports. Cotton was the third largest import item as China relied heavily on it for the textile industry. Cotton accounted for 5.2 percent of total imports in 1979. But in the mid-eighties some cereals and cotton actually evolved to an export position.

Currently, China's import drive is focused on bringing in advanced technology and equipment to upgrade all aspects of infrastructure, agriculture, and export-oriented industries, while conserving supplies of raw materials and resources in short supply at home.

Exports: The composition of commodity exports reflects developments in China's economic structure and policy. In 1953 about 82 percent of China's total exports were agricultural and processed agricultural products. With rapid industrial development and growing domestic consumption, this share fell to 72 percent in 1957 and about 60 percent in 1976.

Exports of light manufactured goods, especially textiles, registered a long-term increase - from 8.8 percent in 1959 to 21.4 percent in 1979. Other light manufacturing goods whose contribution to exports has risen steadily include thermos bottles, ballpoint pens, watches, and furniture (these were mainly purchased by developing countries). In 1979, total textile and light manufactures exports accounted for 35.5 percent of the total.

Total manufactured exports accounted for 46 percent of China's total exports in 1979. This proportion is high compared with those of most other developing countries at the same income level. It reflects China's greater industrialization, due partly to the large size of the country and partly to its development strategy. Textiles and light manufactured goods still account for the major proportion of total manufactured exports, and heavy and chemical industrial products, for only a small proportion (11 percent of total exports in 1979). Despite China's emphasis on the development of machinery and chemical industries, production is not yet efficient enough to tap world markets. Agricultural exports (raw and processed) account for one-third of total exports and remain an important source of foreign exchange.

In the 1970's the emergence of oil as a major export item significantly changed the commodity composition of China's exports. Crude oil exports reached 8.5 million tons in 1976 and 13.4 million tons in 1979. In addition, the sharp increases in oil prices pushed the share of crude oil in China's total export value from 10 percent in 1977 to 17.2 percent in the first nine months of 1980. Foreign exchange earnings represented by this increase greatly contributed to the country's ability to import for the modernization drive.

## The Direction of Trade

A significant swing in the direction of trade away from centrally planned economies and towards market economies was completed by China's final repayment in 1966 of Soviet aid. Trade with centrally planned economies then fell from 70 percent in 1953 to 22 percent in 1966, and trade relations with the USSR virtually ceased. As China increasingly traded with market economies, the share of trade with centrally planned economies in China's total trade declined further to 12 percent in 1979.

Since then, there has been little change in the direction of exports. With the exception of 1970, Hong Kong has been China's largest single export market, accounting for about one-quarter of Chinese exports. A substantial proportion of Chinese exports to Hong Kong is re-exported (mostly to developing countries).

Japan is China's second largest market and most important trade partner. Its purchases (mostly oil, coal, and rice) account for 20 percent of China's total exports. The substantial oil price rise, as well as China's increased volume of oil and coal production, accounts for the increase in Japan's share in 1979 and 1980.

Other industrialized countries - the USA, U.K., Federal Republic of Germany, France, Canada, and Australia take about 20 percent of China's exports.

In the wake of normalization of diplomatic relations, American trade with the Chinese has grown rapidly. By 1979, although the U.S. bought less than 5 percent of China exports, it provided almost 12 percent of its imports and accounted for over 8 percent of total Chinese trade. However, this trade still amounted to only a fraction of 1 percent of total U.S. trade.

In recent years, trade with Western Europe has grown rapidly, both in absolute size and in relative importance. By 1979, it accounted for roughly a fifth of China's total trade and close to a quarter of its imports. But by the same token, China trade accounted for only a fraction of 1 percent of the total foreign trade of the EEC in 1978.

Trade between Canada and China is also developing very rapidly. Total trade between the two countries in 1983 amounted to more than US $1.5 billion, a 60 percent increase over 1982.

A further 20-25 percent of China's trade goes to countries other than Hong Kong: Beijing is attempting to improve relations with the ASEAN bloc and expand trade ties in the region. Though its policies toward Southeast Asia are different from past policies, in terms of enhancing trade they have not brought expected results. China's trade with the countries of Southeast Asia and ASEAN remains insignificant. The entire region accounts for less than 5 percent of China's external commerce. But China's trade with Third World countries is expanding rapidly. As much as 24 percent of the import/export trade in 1982 was with Third World countries to the value of US $9,307 million. This represents a more than five-fold increase over 1970.

Overall, China has a small trade surplus with the centrally planned economies, a large trade surplus with developing countries (excluding Latin America), a surplus with Hong Kong, and a huge deficit with market economy countries. In 1979 the USA, Japan and the FRG shared the leading position in China's trade deficit. For the USA, the deficit mainly resulted from China's large imports of food grain and cotton, and for Japan and the Federal Republic of Germany, from imports of machinery and equipment as well as intermediate goods, including steel and chemical and petrochemical products.

## Prospects

The prospects for China's foreign trade are bright. The country has proved to be an important trading partner for many nations and will be more so in the coming years. Over the near term, it is estimated that the rate of growth of foreign trade will exceed that of the gross national product. Thus, the share of exports in industrial and agricultural production will gradually rise. China's goal is to quadruple foreign trade to US $160 billion by the end of this century.

The composition of trade is not expected to undergo substantial changes. It is estimated that capital goods, equipment and advanced technology will continue to dominate China's imports, as will metals and raw materials for the chemical industry, and food and feed grains. Farm produce, light manufactures, and textiles will continue to be the major exports, and efforts will be made to promote exports of minerals and chemicals. Petroleum plays an important role, and could expand in the near future. However, no increase in coal exports is likely, given the domestic shortfall. As production expands and China becomes more technologically advanced, the country will export more machinery and electrical appliances. Exports of semi-manufactured and manufactured products, which already account for about 50 percent of the total, will become increasingly important. Over the next 4 to 5 years, China will become one of the world's leading exporters of textiles, clothing, and bicycles.

Over the long term, to open new markets, China would like to strengthen "north-south" trade and cooperation. In the medium term, the country is expected to become an even more serious competitor with the West and may replace it as an exporter to some developing countries. As a leading developing nation, where wages are still relatively low, China may increasingly be regarded as a preferred trading partner.

## Foreign Trade Planning and Management

China's foreign trade is conducted according to an annual foreign trade plan prepared by the Ministry of Foreign Economic Relations and Trade in cooperation with the State Planning Commission. The foreign trade plan must be approved by the State Council.

Foreign trade is conducted exclusively through a network of corporations organized on the basis of commodities or services for which they are responsible. These foreign trade corporations (FTC's) have main offices in Beijing and branch offices located in various industrial centres. Although they are under the direct supervision of the Ministry of Foreign Trade, they are separate commercial and legal entities answerable for their operations and commitments.

Trade negotiations conducted through the FTC's can be a prolonged and complex ordeal for foreign business people. Now that the majority of China's trade is being conducted with market economies and the level of trade is rapidly increasing, China requires more flexible channels through which to coordinate this activity.

Recently, the State introduced significant organizational reforms to decentralize foreign trade management, and established new agencies at various administrative levels to institute new policy measures. These measures serve to promote imports, introduce foreign technology, and attract foreign investment. Efforts toward decentralization in foreign trade management aim at bringing more direct contact between Chinese exporters and foreign markets, Chinese end-users and foreign suppliers, and Chinese enterprises and foreign investors. (While some Chinese enterprises have made direct contact with foreign firms, the bulk of China's trade is currently carried still out by the foreign trade corporations).

## Foreign Investment

From the time China opened its doors to foreign trade and investment in 1979 to the end of June 1984, foreign direct investment totaled US $8 billion. By that time, about 3000 projects with foreign participation (of which 362 are equity joint ventures) had started operations. There were also more than 1000 contractual joint-ventures (US $3.5 billion) and 31 contracts on oil exploration along the China coast (US $2.4

billion). As well, 53 foreign wholly-owned projects (US $400 million) had been set up, mainly in the original four Special Economic Zones.

The Special Economic Zones, which were established in the provinces of Guangdong and Fujian, as well as the more recently opened 14 coastal cities, are specifically oriented to foreign investment. Investors are allowed to set up wholly foreign-owned enterprises in these areas and are granted preferential tax treatment. China so far has required such investment to primarily produce commodities for export and thereby foreign exchange.

Today much of the foreign investment in China is through joint-ventures with Hong Kong and Overseas Chinese. A number of joint ventures with Canadian firms have been completed or are in advanced stages of negotiation.

## SECTION A: CHINA'S ECONOMY

### 1(a) Recent Economic Trends

Since 1970, the State has made several dramatic shifts in economic policy to promote economic growth. Due to the success of most of these policies, China is well on the way to achieving the Four Modernizations - development of agriculture, industry, national defence, and science and technology - before the year 2000.

### 1970-78

During the Cultural Revolution (1966-70) there were huge losses to the national economy. Industrial and agricultural output declined, there was a general breakdown of law and order, and severe disruptions to the State bureaucracy occurred. Throughout the country, higher education and research institutions were closed and most managers and intellectuals removed from their positions. As a result, China forfeited an estimated 2 million middle-level technicians and 1 million college and university graduates whose studies were disrupted during this period.

To speed recovery, economic policy in 1970-78 focused on eliminating the worst aspects of poverty, and on spurring economic activity through large capital investments in heavy industry. While this policy started the gradual shift away from planning based on ideological demands to planning based on economic criteria, it concentrated too much investment in heavy industrial production. Important economic sectors such as agriculture and light industry, whose expansion would have contributed significantly to increased domestic living standards, received too little emphasis. Transportation, communications and energy, were afforded inadequate capital investment as well.

In 1978, the country embarked on a 10-year modernization plan. Called the Four Modernizations, it involved a program to modernize agriculture, industry, national defence, and science and technology before the year 2000. While maintaining previous emphasis on heavy industrial development, it represented a significant policy shift by incorporating, as a key component of development, massive imports of foreign technology and equipment. (Until this time, China was strongly opposed to utilizing foreign input on such a large scale). The huge investment program, involving massive amounts of capital, included plans to invest U.S. $7 billion in foreign technology and equipment imports.

## 1979-85

After this program was embarked on, it became evident that it involved an excessive commitment to debt repayment over the long term. Also, it would create severe imbalances in the economy by continued emphasis on heavy industrial growth. Therefore, eleven months after its promulgation, the 10-year plan was postponed in favour of a moderate program involving economic "readjustment, reform, restructuring, and improvement". The new objectives were to create conditions for balanced economic growth, and provide a solid base from which future modernization could develop.

The new program implemented agricultural reforms aimed at dramatically increasing the productivity of rural workers. It directed investment into light, export-oriented industries in order to earn foreign exchange to finance a new, more moderate import program. It tightened control over capital construction, but increased funds to infrastructure development emphasing the development of energy supplies, and improvements to transportation. This new, moderate approach to economic development was significant because it incorporated a shift away from heavy industrial development which had dominated economic policy for many years.

The economy entered a period of slow growth which lasted until 1982. There was a sharp drop in heavy industrial output, from 7.7 percent growth in 1979 to -4.7 percent growth in 1981. To arrest this decline, in 1982, investment in high-profit industries was increased. Capital investment rose 25.4 percent that year - the most rapid increase since 1970.

While this new policy was one of economic restraint, it did not reverse the Open Door Policy of utilizing foreign trade and investment. A key innovation in China's foreign economic relations policy was the establishment, in 1980, of four Special Economic Zones in Southern China. The Shenzhen, Zhuhai, Shantou, and Xiamen zones have been in operation for the past 5 years. Through the foreign investment they have supported, China has been able to experiment with Western management and production techniques, earn foreign exchange, and absorb the newest in Western technology and expertise.

As a result of these policy shifts, economic growth since 1979 has been dramatic. In fact, output has far exceeded the moderate goals set by State planners in 1979. Much of the progress can be attributed to steady growth in the rural areas. The new policies to mobilize peasant initiatives promoted an overall upsurge in agriculture and the country experienced bumper harvests for four successive years (1981-84). This has greatly taken the pressure off Beijing to finance the country's traditional massive annual grain imports. Indeed, China's grain purchases on world markets declined in 1984 for the first time and the country is well on the way to achieving self-sufficiency in food production, and becoming an exporter in some cases.

Light industry also experienced steady expansion. With the allocation of some 10 billion yuan of State funds to light industry as capital investment, 120 large and medium-sized plants were constructed. At the end of 1983, light industry encompassed more than 70,000 enterprises and employed 12 million people.

## Economic Policy for 1986-90

China is now preparing its Seventh Five-Year Development Plan (1986-90) which will include the construction of large power stations, electric trunk railways, heavy machinery plants, electronics and telecommunications industries, and the development of coal and non-ferrous metals mining. (Approximately 400,000 outdated enterprises are in need of technical transformation.) The development strategy is two-fold. Financial and material resources will be concentrated on building up basic industries such as transportation, communications and energy. At the same time, efforts will be made to technically transform existing key enterprises. The goal is to raise all sectors of the national economy the level of technology achieved by the developed countries in the late 1970's and 1980's. The State will continue to further open the country to outside investment and the overall development strategy provides wide opportunities for foreign participation.

## The Special Economic Zones (SEZ)

In 1980, four Special Economic Zones in Southern China, Shenzhen, Zhuhai, Shantou, and Xiamen, were created in order to absorb overseas capital and technology. Chosen for their overseas connections and traditions of interaction with the outside world, they offer preferential terms to foreign investors such as tax incentives, and low charges for land and labour.

Since their establishment in 1980, the zones have experienced steady growth in industry, agriculture, tourism, science and technology. Of the 980 joint ventures set up in China using foreign investment, most have been located in these zones.

They have helped China to restructure its economic and management systems by acting as laboratories for pilot projects involving foreign technology and expertise. Successful experience in the zones - in management, production techniques, and new technologies - has been passed on to other parts of the country. For example, experimentation with Western management techniques, work incentives, and other free enterprise methods contributed to China's decision to initiate in late 1984, significant urban industrial reform policies.

The Shenzhen Zone, in close proximity to Hong Kong, has received much new investment, mainly from the former Colony and has experienced dramatic growth. Construction activity has boomed and modern transport, telecommunications, sewage disposal, electricity, gas, and water systems have been installed. The recently constructed Nantou Heliport in Shenzhen has become the logistics base for the South China Sea offshore oilfields.

Shenzhen's rapid development was demonstrated by its total industrial output value for 1983 which was 720 million yuan, 11 times the figure for 1978. Domestic sales for that year reached 1.1 billion yuan, six times the 1980 figure, and local foreign exchange earnings totalled U.S. 67 million.

## The Special Economic and Technical Zones

In April 1984, following a review of progress made in the zones since 1980, the State Council authorized 14 coastal cities to be opened to foreign trade and investment along guidelines similar to those in the SEZ's. These cities (listed below) now have the power to expand their economic cooperation and trade with other countries and deal internationally on trade matters without consulting Beijing.

Each of the 14 coastal cities has set up a Special Economic and Technical Zone in which foreign investors may operate wholly foreign-owned enterprises. Investors are offered preferential tax treatment and may sell part of any high technology output they produce in the zones on China's domestic market.

The Economic and Technical Zones differ from the four Special Economic Zones in that their emphasis is on the production of high technology goods, and on research and development for industrial application. Through this emphasis, China hopes to absorb foreign capital and advanced technology on a large scale.

To facilitate investment, the 14 cities have been paired off with the Bank of China and its 13 sister banks in Hong Kong. Each of these banks is sponsoring investment in a particular Special Economic and Technical Zone.

The opening of the coastal cities to foreign business activity will create major opportunities for Canadian involvement, particularly in service industries, light manufacturing, and high technology.

The 14 cities include:

- Dalian
- Qinhuangdao
- Tianjin
- Qingdao
- Lianyungiang
- Shanghai
- Guangzhou (formerly Canton)
- Zhanjiang
- Nantong
- Ningbo
- Wenzhou
- Fuzhou
- Beihai
- Yantai

Their main features are outlined below:

Dalian: This port has excellent natural conditions and operates year-round. In 1983, it handled 35 million tons of goods. The city has an extensive network of machine-building, metallurgical, shipbuilding, petrochemical, electronics, and textile industries, and maintains trade relations with more than 100 countries and regions.

Qinhuangdao: Also an excellent natural port, Qinhuangdao can handle 40 million tons of goods annually. Its ice-free bay is accessible all year-round. Renowned for glass-making, the city's plate glass sales account for 70 percent of the national total. Qinhuangdao's other industries have developed rapidly over the past five years.

Tianjin: This city is one of three municipalities directly under control of the central government. It is an important industrial centre, with 4,400 factories, and a large technical force. A leading freight port in North China, it is capable of handling 15 million tons of goods annually. In 1983, Tianjin signed 150 agreements to import technology. It has trade relations with 168 countries and regions.

Qingdao: This city has a complete industrial structure based on light industry and textiles. Its production of metallurgical products, rubber, chemicals, electronics, instruments and meters, and building materials are also well-developed. Its annual export volume ranks sixth among China's cities. It is famous in China for its water and beer.

Lianyungiang has abundant agricultural and aquatic resources and is one of eight major fishing centres in China. It has 1,200 industrial companies and is the nearest export outlet for the nine provinces in Central and Northwest China.

Shanghai is China's largest economic and industrial centre, and as the largest port in China, is accessible to 16 Chinese provinces and cities, and to all leading ports in the world. It has 8,500 enterprises, of which 5,500 produce light industrial products, and has trade relations with more than 160 countries and regions.

Guangzhou (formerly Canton) is the leading metropolis in South China. It is a centre for land, sea and air transportation and has more than 4,000 factories. The city's light industry is especially well developed, producing in 1984 the second largest annual output of sewing machines, refrigerators, radio records, and cameras in China since 1957. Guangzhou hosts the Chinese Export Commodities Fair, held twice a year. It trades with 140 countries and regions and has transportation connections with more than 500 ports around the world.

Zhanjiang is the closest Chinese port to Southeast Asia, Africa, and Europe. It recently became the exploration base for oil resources in the Western South China Sea. Loading facilities and deepwater berths for 10,000 ton ships are currently under construction at Zhanjiang. New profits and remittance tax breaks, are expected to bring in foreign capital to expand facilities even further over the next 5-10 years.

Nantong: This port, located on the banks of the Yangtze Estuary, serves the city's 5,000 industrial enterprises. Fourteen 10,000 ton grade berths, 17 intermediary berths and six operation areas are planned for construction in the near future to accommodate the region's increasing economic activity between China and foreign interests.

Ningbo: Located on the southern shore of Mangzhou Bay, Ningbo is one of China's oldest ports and a significant export production centre. 200 of its 5,400 factories produce light industrial products. The port's 21 berths are capable of handling 26.7 million tons annually.

Wenzhou: Wenzhou, one of the gateways to southeast China, has eight well-developed industries including foodstuffs, textiles, shipbuilding, computers, and refined chemicals. The region's dairy exports account for more than half the national total. This port has more than 20 wharfs. Plans for construction include another forty 10,000-ton berths.

Fuzhou: Fuzhou is one of China's oldest foreign trade ports, and is the political, economic, and cultural centre of Fujian Province. Fuzhou's rapid industrial and agricultural development has sharply increased its exports in recent years. The port has trade relations with more than 50 countries and regions.

Behai: This port is well-known for its good natural conditions, abundant agricultural and industrial production, and efficient transportation facilities. It has business relations with 167 ports in 67 countries and regions. Behai will handle 16 million tons of goods annually when current renovations are completed.

Yantai: Yantai is located opposite Dalian across the Bohai Sea. It produces large amounts of seafood (its prawn catch ranksfirst in China), and its strong industrial and agricultural development has made it one of China's leading export centres. The port has 15 berths capable of handling five million tons of goods annually, and six new berths are under construction. Yantai has connections with more than 90 countries and regions.

## Hong Kong

Established originally as a trading entrepot in the eighteenth century, Hong Kong is today the third largest container port, third largest financial centre, seventeenth largest trading unit, and largest garment exporter in the world. Its exports were $13 billion in 1983, and its entrepot trade came to $34 billion, much in the form of goods transshipped to China.

Hong Kong's ties with China began to evolve after World War II. Its export processing industries developed rapidly during this period, and the territory began a dependence on China for food supplies. In 1967, an agreement was reached for China to provide water supplies to Hong Kong.

Hong Kong has been one of China's major trade partners since the 1950's, absorbing by itself 1/4 - 1/3 of China's total exports to non-Communist countries. Today China earns approximately 40 percent of her foreign exchange through the British Crown Colony. For this reason, it has been in China's interest to ensure that Hong Kong's economic and social systems remain relatively unchanged.

Recently, after two years of consultation, Britain agreed to cede sovereignty of Hong Kong to China on July 1, 1997. On that date the 99-year lease agreement under which Britain has governed the New Territories will expire and all parts of the Colony will revert back to China's control. Hong Kong will then become a Special Administrative Region (SAR) within China and maintain a high degree of autonomy. Its current social and economic systems are planned to remain unchanged for at least 50 years.

The Chinese have stated that this agreement is based on their "One Country, Two Systems" principle, which shows concern for the history and current conditions of Hong Kong by guaranteeing continued stability, mutual prosperity, and respect for the interests of the local population and customary practices. By this agreement, Beijing would like to preserve the benefits which presently accrue to China from Hong Kong's present economic system. These benefits include $7 billion in annual foreign exchange earnings, easy access to financial markets, technology transfer, and access to a large source of skilled human capital.

China is already well into the process of making the transition to regain control of Hong Kong. In addition to a well established trading relationship, it has gained considerable economic influence by investing heavily in the Colony through intermediaries, such as the China Resources Company and the Everbright Industrial Corporation. The Bank of China, and its 13 related banks have created a local banking network that accumulated more than H.K. $100 billion in assets by the end of

1982. With its 239 branches linked by a computer network, the Bank of China group now has 30 percent of all deposits in the Colony. The Hong Kong Chamber of Commerce estimates that Beijing's investment portfolio in the port is worth over $2.56 billion.

Hong Kong companies, in turn, have established strong business ties with the Chinese mainland. Over half the foreign investment in the four Special Economic Zones (over $1.4 billion) has been made by Hong Kong businessmen.

## Hong Kong 1997-2047

The nature of Hong Kong's economic and political systems during the 50 year "transition" period, following China's takeover in 1997, will depend on how many of its current characteristics are allowed to remain intact. The current benefits to China of Hong Kong's capitalism may not continue into the future and this may influence the course of its administration. For example, once China assumes sovereignty, it is not clear that all Hong Kong remittances will continue to be classed as foreign exchange. As well, its role as a source of technological expertise and skilled labour may suffer by the loss of highly trained people through emigration.

## Canada-Hong Kong Economic Relations

Total trade between Hong Kong and Canada is $1.2 billion annually. Canada's exports to Hong Kong at present are stable at about $220 million per year. Goods range from raw materials to highly processed food stuffs and consumer goods. Re-exports of Canadian goods from Hong Kong to China are increasing rapidly.

All the major Canadian banks have a large presence in Hong Kong and a growing number of Canadian companies, including the major insurance companies, are establishing their presence as well, often as a central location for the development of markets in China and Southeast Asia.

Hong Kong is Canada's largest source of entrepreneurial immigration, attracting more than $380.5 million of foreign investment in 1984.

The Colony is currently an excellent stepping stone for trade development in China. A number of Canadian firms have made their initial contacts with Chinese enterprises from Hong Kong and others have linked up with Hong Kong firms to do business in China on a joint basis. Closer ties between Hong Kong and China are expected to further enhance business between foreign firms and China.

Hong Kong's return to Chinese administration may provide opportunity for Canada to enhance existing Canadian interests in the Colony, and expand exports to both Hong Kong and China. Increased Federal commercial assistance to Canadian business in the Colony is planned. This will include the better identification of traders who can assist Canadian marketing activities in China.

## 1(b). Economic Administration and Economic Reform

China has 30 administrative units which have similar hierarchal status relative to the central government. They include 22 provinces, five autonomous regions, and three centrally administered municipalities (Beijing, Shanghai and Tianjin). These provinces and autonomous regions are subdivided into counties which, in turn, are divided into communes.

China's central administrative agency, the State Council, is composed of representatives from seven national commissions, and 33 ministries and representatives from the Bank of China. A major consolidation of the central administrative agencies was undertaken in 1982. Ninety-two national ministries and commissions were reorganized into forty-one. The State Council also includes the Premier, two Vice-Premiers, the Secretary of State and ten State Commissioners. The head of the State Council is Premier Zhao Zhiyang.

The highest organ of state power is the National People's Congress of the People's Republic of China (NPC). The NPC and its Standing Committee exercise the legislative power of the State.

China's economy is centrally controlled by the State bureaucracy. An organized economic planning system operates through a number of important bureaus and offices. The State Council is responsible for determining China's economic goals and setting guidelines for all economic sectors. The State Planning Commission then formulates detailed plans, supported by input from a variety of other agencies, the most important of which is the State Statistical Bureau, which provides specific quantitative data necessary for planning.

Other agencies contribute support, including the People's Bank, the State Capital Construction Commission (responsible for the construction of economic projects and overseas investments in fixed assets), the State Agricultural Planning Commission and the State Energy Commission.

For the purposes of economic planning, the country is divided into six geographic regions which manage their own internal economic operations according to guidelines set by the annual plans. The central government co-ordinates these regional activities.

Each year plans are implemented by the central government to set agricultural output targets and co-ordinate the growth of 22 essential industries. Five year plans and longer term plans are also devised. G.N.P. targets and output goals for agriculture and industry are established as well as priority sectors for development.

To carry out the plans, the 22 ministries are responsible for appointing managerial and technical personnel to each production unit, and for supervising operations. To co-ordinate regional activity, the central government acts as a transfer agent - buying surpluses and selling supplies to each economic region.

Thus, China's public sector is overwhelmingly dominant in every phase of the economic system, being responsible for human resource management, income distribution, commodities distribution, planning and the allocation of resources.

## Problems of the Centralized System

Since the Revolution in 1949, China's experience with economic planning has been inconsistent. Not all the five year plans have been successful and some have been abandoned before completion.

Many aspects of the centrally controlled system have inhibited economic growth. For example, the government control of demand and supply of basic consumer goods made it feasible to guarantee minimum subsistence levels to the population, but also necessitated prolonged rationing and fixed prices. The fact that price and output products were not related to market demand, caused continual shortages and inventory stockpiling throughout the country.

Adding to this problem has been the poor performance of the central distribution system in its allocation of raw materials, industrial inputs and finished products to industry and construction. Poor co-ordination of materials and supplies resulted in the lack of completion of several significant capital construction projects.

Under centralized control, a huge bureaucratic hierarchy was created to co-ordinate the economy. As state organs expanded, the process of decision-making became complex and time-consuming. Minor business decisions could take months to formulate and carry out. With the advent of the Open Door Policy in 1979, inefficiencies became fully apparent, as the country tried to accommodate increased levels of trade and foreign investment.

Damaging effects on economic efficiency also resulted out of an egalitarian wage structure and the lenient management of agriculture, industry and enterprise. Under the commune system, individuals who worked hard and were very productive received the same income as those who did not. This policy, and the practice of permanent employment in government and industry, encouraged lax discipline among workers and perpetuated incompetence within the bureaucracy[1]. Although the aim of these policies was egalitarianism, they did not serve to link income to work effort and thus had the effect of destroying worker initiative.

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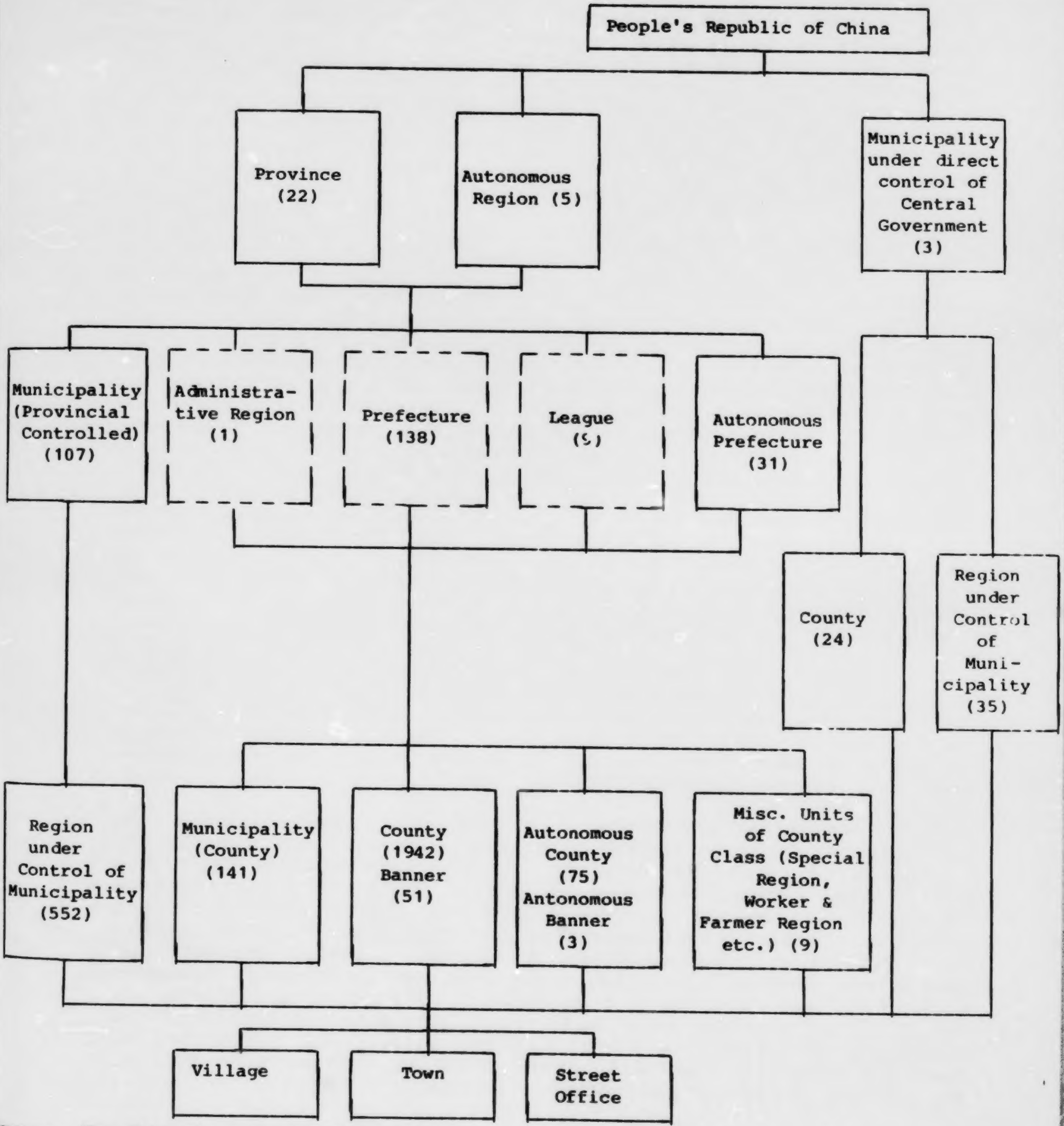
[1] Source: The Beijing Review.

Demarcation of Administrative Regions


People's Republic of China
Province (22)
Autonomous Region (5)
Municipality under direct control of Central Government (3)
Municipality (Provincial Controlled) (107)
Administrative Region (1)
Prefecture (138)
League (9)
Autonomous Prefecture (31)
County (24)
Region under Control of Muni- cipality (35)
Region under Control of Municipality (552)
Municipality (County) (141)
County (1942) Banner (51)
Autonomous County (75) Antonomous Banner (3)
Misc. Units of County Class (Special Region, Worker & Farmer Region etc.) (9)
Village
Town
Street Office

Source: The China Investment Guide, China International Economic Consultants Inc., Longman Group Ltd. 1984, p. 28.

Failure to separate the functions of government from those of enterprise management absolved managers of their responsibility to improve production and lower costs. Enterprises were required only to meet production quotas and often did so without proper attention to quality and packaging. Production units which, because of small scale, backward technology, etc., were uneconomic, received subsidies from the State instead of being required to close down. All these conditions, by causing massive inefficiency and waste, underlay China's economic stagnation over the period 1953-1978.

## China's Recent Economic Reforms

At the time China's Open Door Policy and economic readjustment program were being implemented in 1979, some economic reforms were introduced into the rural areas. These reforms involved replacing the commune system with a system which would encourage free enterprise among the peasantry. Under the new "rural responsibility" program, land and other basic means of production remained publicly owned. Fields were allocated to individual families who then contracted with their local brigade to meet specific output quotas and payments. Grain, cotton and oilbearing crops were still sold to the State, but their base procurement prices were greatly increased. Each household was allowed to retain excess production to be sold at a premium price over the base price in local markets. Permission was also given farmworkers to trade vegetables and other products such as handcrafts at urban markets and local fairs. These measures served to link remuneration to output, and acted as strong incentives to increase agricultural productivity.

Under this new system, the rural population showed unprecedented initiative at farm work. In the six years between 1979 and 1984, China's total grain output grew from 304 million to 400 million tons. This is an astounding achievement. It took 13 years to raise grain output from 200 million to 300 million tons over the period 1966-1978.

Additional benefits have included specialization in agricultural production and dramatic increases in the living standards of rural farmworkers. Significant benefits from this policy also accrued to urban dwellers. With the revitalization of the rural economy, a huge demand was created for industrial products, technological expertise and equipment for application to agriculture. Increased rural incomes steadily strengthened demand for consumer products, necessitating improvements to urban production and distribution systems. The cities are now being required to provide more industrial products, scientific and technological skills, and cultural and educational facilities to meet the needs of the peasantry. This has improved conditions for overall reform of the national economy.

With the changing situation in the country, similar reform in the cities was inevitable. In October 1984, China's authorities announced their decision to begin implementing reform in the urban areas. The primary goal is to increase the economic efficiency of urban enterprise and industry. To achieve this, reforms are planned to gradually allow market forces (supply and demand) greater influence in determining output and prices. Beginning in 1985, the number of industrial goods subject to mandatory state planning is being reduced from 120 to 60 and the number of agricultural commodities, from 30 to 10. Greater decision-making power is being delegated to industry and management. In this way, reliance on mandatory plans will be reduced in favour of guidance planning and market regulation. Government organs will now guide and supervise, but not directly manage, economic enterprises.

These plans necessitate a new focus on China's management system, especially middle and large scale industrial and commercial enterprises. Competition is being introduced among enterprises, and the state is switching from a system of profit remission to taxation. Many small commodity industries are being allowed to operate independently in the areas of production, marketing, and selling directly to retail stores. These measures have created a huge demand for personnel training in the areas of Western management and organizational methods.

Wage and price structures are major targets for urban reform. The leadership plans to introduce a comprehensive wage structure which will increase wage differentials and reward workers for initiative and productivity. The object of wage reform is to further establish the principle of pay according to work effort. This is expected to significantly increase industrial labour productivity.

Price reform will be carried out on the basis of price stability although prices will not be rigidly frozen. The State will attempt to allow prices to reflect the true market value of most products, but will continue to use subsidies where necessary to protect real purchasing power and living standards.

Price reform is expected to be the most difficult task of the reforms since it will involve the length and breadth of the economy and affect tens of thousands of families. For this reason, it is planned to be carried out over a period of four years or more.

To improve materials allocation and distribution, several measures are being implemented. The State is making efforts to change the basis of materials allocation and commodity flow planning from administrative regions to economic zones. In line with this, there are plans to restore the historic economic centres. Thus, Shanghai may become the economic centre for the Southeast; Tianjin for North and Northeast China; Guangzhou for South China; Chongquin for the Southwest, and Hankou and Xian for Central and Northwest China respectively.

The increased decision-making power of enterprises, direct contact between wholesalers and retailers, and greater autonomy over the purchase and sale of raw materials and consumer goods is expected to help rationalize the current poor materials allocation and distribution systems. Ongoing improvements to the transport system, expecially ports and railways, will contribute significantly to a more efficient movement of goods throughout the economy.

All these measures are aimed at correcting shortcomings in the existing system. But, centralized market control has operated for three decades, and thus reform will be a slow process. While the outcome is difficult to assess at present, it is clear that if this process can be carried to completion, it could benefit the entire Chinese population by dramatically increasing living standards. Meanwhile, the outlook for trade and foreign investment is already greatly enhanced. Some immediate implications for foreign companies doing business in China are discussed below.

## Benefits to Trade

Increased bilateral trade is an anticipated result of the new economic reforms. Measures to enhance economic efficiency such as improving the distribution system and materials allocation, and introducing free market forces into the wage and price structures, should contribute to a gradual increase in urban incomes. This will translate into greater demand for consumer products, a demand which may be met in the international market.

Decentralization of the bureaucracy is expected to ease the complexities in China's foreign trade system by allowing foreign firms to contact enterprises and factories directly. The fact that individual enterprises have greater autonomy in decision-making, and more direct access to financial resources is expected to speed the processes of communication, negotiations, and decision-making among Chinese officials. This will contribute to declining market entry costs in terms of time, energy, and money, for foreign firms.

The new right of enterprises to produce beyond their plan quota will increase China's overall demand for raw material inputs to industry and high technology production equipment on international markets.

The environment for foreign joint venture operations will be enhanced by improved materials allocation and distribution systems.

Foreign firms attempting market entry into China have encountered problems because they were unable to conduct accurate market demand studies. Now that firms are gaining direct introductions to factory and industry representatives, and price controls are being lifted, the prospects for being able to correctly assess China's market demand are improving.

## 2(a) Constraints on Modernization

China still ranks among the poorest countries in the world, with a per capital income of only $260 in 1983. Despite steady development, the economy as a whole is still very weak. To achieve its modernization goals, many bottlenecks, obstacles, and constraints need to be overcome.

Over the period 1986-90, major development efforts utilizing foreign capital and expertise will be concentrated in the weaker areas. A foreign project or proposal will have an edge over its competitors' if it contributes to enhanced performance in problem sectors of the economy.

The following discussion outlines some major constraints to economic development in China today. Its purpose is to make potential Canadian entrepreneurs aware of the constraints to doing business in China, and also convey an understanding of the development assistance China is seeking over the next 5 -10 years.

### Energy

Industrialization is severely inhibited by infrastructure deficiencies. Poor performance in the energy sector has been cited as the greatest constraint, where the lack of installed capacity is worsened by bottlenecks in fuel transportation. Inefficient energy usage is also a major difficulty. Much of China's highly energy-intensive industrial sector utilizes outdated production systems which waste fuel and electricity. Rapid development in all aspects of the energy sector is needed to promote agricultural mechanization, the dieselization of railway transport, and manufacturing.

### Transportation

Transportation is another major infrastructure constraint. China must make tremendous efforts to improve the materials distribution system, by upgrading port and harbour facilities, and expanding the road and highway networks. Inadequate railway capacity currently inhibits the transport of huge quantities of coal, cement and raw materials to urban industrial centres located on the coast.

### Natural Resources

China is channelling much investment into natural resource development and exploitation. But, since many of these projects involve a large capital outlay and take several years to complete, many raw materials industrial inputs must be imported until domestic supplies come on stream. Lack of raw materials supplies such as wood and wood products, constrain industrialization, and this, of course, includes investment undertaken with foreign partners. Facilities in the Special

Economic Zones were specifically created to help alleviate this constraint on foreign investment.

## Industry

A further constraint on development is the low technological level of the majority of China's 400,000 state enterprises whose production is needed to earn foreign exchange through exports. Solid performance in this sector is the key to financing technology imports for modernization. Without technical transformation in these enterprises, economic growth cannot be accelerated. Lack of a highly trained work force has worsened problems of low technical efficiency in industry by making the rapid absorption of foreign technology and expertise more difficult.

Adding to the problem of poor technical performance in industry, is the fact that research and development for industrial applications is almost non-existent. In the past, China's research efforts have focused on pure, rather than applied (practical) science, and few individual enterprises now have facilities for research and development.

## A Shortage of Capital

China is faced with the task of carrying out large scale expansion despite a critical shortage of capital. This constraint strongly dictates the nature of business activity the country will undertake with foreign partners.

China is still not a major foreign trader. The State's foreign exchange earnings are therefore limited and for this reason, China generally will not allow foreign exporters access to its domestic consumer market. Foreign exchange is allocated instead to purchases of raw materials and resources which are in short supply domestically; key equipment, equipment processes, and production technology; and expertise which must serve primarily to upgrade and improve China's own industrial production capabilities. The exception to this policy are the development guidelines for the 14 new Economic and Technical Zones which allow some access to the domestic market for products manufactured in the zones.

China's planned role for foreign participation over the next decade involves the transfer of technological processes and know-how, as opposed to outright purchases of high technology goods; improvements to infrastructure using foreign capital and equipment in joint venture projects with foreign partners, rather than outright purchases of foreign technology and equipment; and improvements to industry through joint ventures rather than through purchases of plant and equipment. Moreover, China expects trade and investment with foreign countries to be a two-way street, strongly desiring reciprocal access to Western markets to maintain trade deficits at manageable levels.

There are good opportunities for Canadians to assist China in overcoming these constraints to development. Canadian entrepreneurs can expect to be most successful however if they tailor their product or project proposals to China's areas of need, and remain flexible about financing and alternate forms of economic cooperation. For detailed information about China's preferred forms of business arrangements with foreign firms, please refer to "B4: Modes of Cooperation Between Chinese and Foreign Businesses".

## ECONOMIC SECTORS: AGRICULTURE

China's agricultural system is considered by many to be the largest in the world. Although it accounts for less than 8 percent of the world's arable land, it provides food for 22 percent of the world's population. An estimated 800 million people - 80 percent of the country's population - are employed on the land.

Agriculture provides the underpinnings for the entire economy. The source of one-quarter of the gross national product, it provides inputs to the industrial sector, generates foreign exchange through exports, and contributes to the diet of China's one billion people.

Grain crops account for 80 percent of the country's total agricultural output. Rice is the most important grain and a major export, followed by wheat and corn. Cotton is the principal industrial crop and a major source of raw materials for China's large textile sector. Other major agricultural products include oil-bearing crops, sugarcane, beetroots, jute, silk, tea, tobacco, fruit, rubber, groundnuts, pork, beef, mutton, wood, and dairy and aquatic products.

China plays an important role in the world agricultural economy. It produces more than 10 percent of the world's annual output of rice, wheat, corn, sorghum, soybean, cotton, groundnuts, rapeseed, and tea, and more than 25 percent of the world's tuber crops. It leads the world in rice production, with an annual output more than three times that of India, the world's second largest producer. It is the largest producer of potatoes and tobacco, a leading exporter of tea, oilseeds, and silk, and a major exporter of cotton and sugar.

In addition to its sizeable farm production, China has extensive rangelands which support a large livestock population. This includes the world's largest goat population (70 million stock), as well as an enormous sheep population (about 100 million stock) which is second only to Australia's. Most significantly, the country accounts for about 40 percent of the world's pork production, with stock numbers exceeding 300 million head.

Livestock is a large generator of foreign exchange for China (Table 1). Pork and hog bristles, for example, rank among the six major exports (Table 2). Other top-ranking agricultural exports are grain, cotton, oil-bearing crops, tea and aquatic products. Significant agricultural exports to Canada include vegetables and other vegetable preparations ($14,818,000 in 1982) and nuts, except oil nuts ($10,609,000 in 1982).

Despite the magnitude of its agricultural sector, China is far from self-sufficient in food production. Grain imports from Canada (China's preferred supplier) and other Western nations total about 15 million tons annually. Cereals in general have traditionally dominated the nation's import structure. (During 1982 imports of Canadian wheat alone totaled over $736 million. Other major Chinese agricultural imports include cotton, sugar, and animal and vegetable oils. In addition, other major Chinese imports such as timber and chemical fertilizers are closely related to the needs of agriculture. Food and agriculturally-related imports are a constraint to Chinese modernization efforts because they drain foreign exchange reserves needed for purchases of foreign technology and equipment for other sectors.

Agricultural development has top priority in the modernization plan. Enormous efforts are being made to ensure that grain production and other sectors of agriculture meet the needs of both population and industry, although the constraints facing agricultural development are significant.

China's arable land base is extremely limited. There is currently little land available for conversion to agriculture. Future gains in output must come from increased crop yields (although these are already high relative to developed countries). Over the next 15 years, increased crop yields are expected to result from better irrigation, improved fertilizer application, and, most important, agricultural reform.

In recent years chemical fertilization, irrigation, and mechanization have proceeded at a generally faster rate than in most developing countries. Each year about 1 million more hectares of land are irrigated, giving China a total of 44 million hectares of irrigated land in 1983. The major catalyst for increased production, however, has been a series of reforms introduced into the agricultural sector over the past six years. Based on encouragements to individual production and private enterprise, they involve increased State purchasing prices for agricultural products, the allocation of private plots of land to individual households (for up to 15 years), as well as State promotion of cottage industries and sideline occupations as legitimate economic activity.

The increases in agricultural production have been dramatic. Agricultural labour productivity increased by an average of 2.7 percent a year during 1979-84. (In comparison, the total increase in agricultural labour productivity between 1953 and 1978 was only 2.7 percent). Accordingly, agricultural China experienced bumper harvests in 1982-84. The average standard of living of most peasant families has also improved. (In 1983 alone the average per capita income of peasant families rose from Rmb 134 to Rmb 310, an increase of more than 12 percent in real terms.

Over the next 15 years the policies for agriculture will continue these reforms and grain production will remain the top priority in agriculture. Eighty percent of arable land will be devoted to grain growing. It is hoped that China can quadruple grain production by the end of this century and drastically reduce grain imports.

Already the improvements in agricultural performance have impacted on Canada's trade with China. Chinese purchases of Canadian grain fell by 1,253,800 metric tonnes from 4,526,000 metric tonnes in 1983 to 3,272,200 metric tonnes in 1984 and considerably less in 1985.

Some areas in the agricultural sector where other opportunities may exist include the following:

- range, horticulture, haying and food processing equipment, technology, and management practices;
- poultry production processing and technology;
- artificial insemination technology and expertise;
- animal production management expertise;
- animal health and nutrition;
- greenhouse, nursery technology, production, storage and marketing technology;
- orchard and row-crop equipment manufacturing, fruit juice processing and packaging;
- irrigation expertise and technology;
- reseeding machinery and technology;
- dairy production expertise and technology.

(Source: Ministry of Food and Agriculture)

## TABLE 1
## OUTPUT OF MAJOR AGRICULTURAL PRODUCTS

(million tons)

| | 1965 | 1978 | 1982 | 1983 |
|---|---|---|---|---|
| Grain | 194.53 | 304.77 | 354.50 | 387.20 |
| Of which: | | | | |
| Rice | 87.72 | 136.93 | 161.60 | 168.87 |
| Wheat | 35.22 | 53.84 | 68.47 | 81.39 |
| Corn | 23.66 | 55.95 | 60.56 | 68.21 |
| Soybeans | 6.14 | 7.57 | 9.03 | 9.76 |
| Tubers | 19.86 | 31.74 | 27.05 | 29.25 |
| Cotton | 2.10 | 2.17 | 3.60 | 4.64 |
| Oil-bearing crops | 3.63 | 5.22 | 11.82 | 10.55 |
| Of which: | | | | |
| Peanuts | 1.93 | 2.38 | 3.92 | 3.95 |
| Rapeseed | 1.09 | 1.87 | 5.66 | 4.29 |
| Sugarcane | 13.39 | 21.12 | 36.88 | 31.14 |
| Beetroots | 1.98 | 2.70 | 6.71 | 9.18 |
| Jute, ambary hemp | 0.28 | 1.09 | 1.06 | 1.02 |
| Mulberry silkworm cocoons | 0.07 | 0.17 | 0.27 | 0.27 |
| Tea | 0.10 | 0.27 | 0.40 | 0.40 |
| Cured tobacco | 0.37 | 1.05 | 1.85 | 1.15 |
| Fruit | 3.24 | 6.57 | 7.71 | 9.49 |
| Rubber | 0.02 | 0.10 | 0.15 | 0.17 |
| Walnuts | 0.05 | 0.11 | 0.10 | 0.12 |
| Pork, beef, mutton | 5.51 | 8.56 | 13.51 | 14.02 |
| Milk | | 0.88 | 1.62 | 1.85 |
| Wool, sheep | | 0.14 | 1.20 | 1.19 |
| Aquatic products | 2.98 | 4.66 | 5.16 | 5.46 |

## TABLE 2
## MAJOR EXPORTS

(Figures supplied by foreign trade departments)

| | 1965 | 1978 | 1982 | 1983 |
|---|---|---|---|---|
| Pork (thousand tons) | 273 | 194 | 319 | 332 |
| Aquatic products (thousand tons) | 120 | 92 | 101 | 105 |
| Tea (thousand tons) | 38 | 87 | 103 | 133 |
| Cotton cloth (billion metres) | 0.80 | 1.10 | 1.12 | 1.33 |
| Petroleum (thousand tons) | 299 | 13,487 | 20,476 | 20,314 |
| Tungsten ore (thousand tons) | 21 | 18 | 11 | 24 |
| Hog bristles (thousand cases) | 47 | 131 | 137 | 158 |

## MAJOR IMPORTS

(Figures supplied by foreign trade departments)

| | 1965 | 1978 | 1982 | 1983 |
|---|---|---|---|---|
| Cereals (thousand tons) | 6,405 | 8,833 | 16,117 | 13,435 |
| Cotton (thousand tons) | 199 | 510 | 474 | 223 |
| Sugar (thousand tons) | 708 | 1,299 | 2,177 | 1,900 |
| Animal and vegetable oils (thousand tons) | 81 | 330 | 180 | 133 |
| Timber (thousand $m^3$) | 1,568 | 534 | 4,827 | 6,498 |
| Rolled steel (thousand tons) | 759 | 8,638 | 3,938 | 9,780 |
| Chemical fertilizer (thousand tons) | 2,735 | 7,333 | 11,108 | 15,192 |

## TABLE 3
## TOTAL AREA OF FARM CROPS SOWN

| | 1965 | 1978 | 1982 | 1983 |
|---|---|---|---|---|
| Total area sown (million ha) | 143.29 | 150.10 | 144.75 | 143.99 |
| Composition (%) | | | | |
| Grain crops | 83.5 | 80.3 | 78.4 | 79.2 |
| Industrial crops | 8.5 | 9.6 | 13.0 | 12.35 |

## TABLE 4
## TRACTOR-PLOUGHED AREA, IRRIGATED AREA, CHEMICAL FERTILIZERS APPLIES AND ELECTRICITY CONSUMED IN RURAL AREAS

| | 1965 | 1978 | 1982 | 1983 |
|---|---|---|---|---|
| Tractor-ploughed area (million ha) | 15.58 | 40.67 | 35.12 | 33.57 |
| Irrigated area (million ha) | 33.06 | 44.97 | 44.18 | 44.64 |
| Chemical fertilizers applied (million tons) | 1.94 | 8.84 | 15.13 | 16.60 |
| Electricity consumed (billion kwh) | 3.71 | 25.31 | 39.69 | 43.52 |

## TABLE 5
## MAJOR AGRICULTURAL MACHINERY
### (year-end figure)

| | 1965 | 1978 | 1982 | 1983 |
|---|---|---|---|---|
| Total horsepower of agricultural machinery (million hp) | 14.94 | 159.75 | 225.89 | 245.03 |
| Large and medium-sized tractors for agricultural use (thousand) | 72.60 | 557.40 | 812.40 | 840.80 |
| Small-sized tractors & walking tractors for agricultural use (thousand) | 4 | 1,373 | 2,287 | 2,750 |
| Motors for agricultural drainage and irrigation (million ho) | 9.01 | 65.58 | 76.70 | 78.49 |
| Combine harvesters (thousand) | 6.70 | 18.99 | 33.90 | 35.73 |
| Trucks for agricultural use (thousand) | 11.06 | 73.77 | 206.38 | 274.75 |

Source: The State Statistial Bureau,
People's Republic of China, 1984.

## FISHING

China is the world's largest fishing nation. The country's annual production of aquatic products in 1983 was 5.46 million tonnes of which 1.7 million tonnes were supplied by fresh-water aquaculture.

Aquatic products figure significantly in China's agricultural exports. Exports of aquatic products in 1983 totaled 105 thousand tons (up from 92 thousand tons in 1978). Items such as prawns and scallops account for a high percentage of export earnings and are popular in international markets. However, a shortage of fish supplies on domestic food markets remains due to the underdevelopment of the fishery industry.

There is great potential for fishery development. China's shallow coastal seas are among the best fishing grounds in the world. The total area of China's continental shelf (with waters less than 200 metres deep) comprises nearly a quarter of the world's total fishing grounds. China also has large expanses of beach which can be used for fish breeding. Natural marine farms can be created in these areas, providing a variety of seafood for both domestic and international markets.

The number of species in China's seas is known to exceed 1,500, of which some 250 are found in the Yellow Sea and another 400 in the East China Sea. Chinese coastal and offshore fishing concentrates mainly on some 50 species. Of these, a mere 7 yield a larger catch than the rest combined, including the small croaker, the large croaker, the girdlefish, and the white-scale herring.

China is only developing a distant-water fishing industry comparable to those of other developing countries such as South Korea. Unlike other major fishing countries that have sophisticated ocean-going fleets, the Chinese so far have engaged primarily in coastal and inland fishing, and aquaculture plays a major role in national fish production.

China leads the world in fresh-water fish breeding and has a large inland water resource available for this purpose. Annual production is 1.2 million metric tonnes of carp. In marine waters, about 1 million metric tonnes of kelp (seaweed) are produced annually as well.

Over the past 10 years, especially during 1976-80, China has encountered problems of declining productivity in the fishery industry. In aquaculture, this has been caused by the destruction of fishponds, through pollution and other water projects, and the conversion of lakes and estuaries to grain cultivation. In the saltwater fishery, overfishing and consequent enforcement of the aquatic protection laws have contributed to low marine landings.

During the period 1981-90 the State is concentrating fishery development resources on (1) protecting near sea resources with scientific management aimed at the recovery and propagation of resources; (2) full utilization of inland waters and fish farms; (3) the establishment of bases for breeding high quality, high yield species of fish and prawns; (4) acquisition of increased processing and preservation technologies; and (5) improving supplies on the market. By 1990, China's goal is to have an average annual increase in sea catch output of 2-3 percent, in sea breeding 5 percent, and in fresh-water aquatic output 8-10 percent. The domestic production target is 4-5 million tonnes of fresh water fish produced annually.

China has received foreign support in obtaining the necessary equipment, expertise, and assistance to achieve these goals. Compensation trade agreements are the preferred method of payment, and exchanges have generally involved marine products. The principal countries involved have been Hong Kong, Japan, and Norway, each reporting high "sales" to China.

The Chinese are well advanced in fish reproduction and production technology. However, compared to Canadian expertise and technology, they are backward in fish disease control, nutrition, and physiology. Both Canada and China could benefit from technological exchanges in marine and fresh water fish, shellfish, and seaweed culture. British Columbia, in particular, could benefit from the opportunity to study large volume production methods.

## FORESTRY

The forest sector is vital to China's overall development as it supplies part of the huge domestic and industrial demand for fuelwood, charcoal, and construction materials. Forestry has lagged in development, however, and this has slowed progress in other sectors. For example, agriculture has not been given adequate cropland and watershed protection through afforestation. Transportation development has been held up due to a lack of railway ties. Mining development, whose important forest sector input is mine props, has also been delayed.

China is not well-endowed with forests. Only 122 million hectares, or about 12.7 percent of the land area, is under forest cover (30 percent forest cover is considered average for large countries). Per capita forest area is 0-13 hectares against the world average of 1 hectare, and per capita forest volume is less than 10 cubic metres against the world average of 83 cubic metres.

The principal species are larch, pine and spruce, all softwood timber species. Of the total forest land, approximately 80 percent is in state forests, the remainder being owned by communes, municipalities, and other administrative subdivisions. Commercial forest volumes have been estimatd at 9.7 billion m3, 60 percent of which is located in the Northeastern Provinces and Inner Mongolia. Here, extraction costs are considerable due to infrastructural limitations and severe climatic conditions. (Winter temperatures can reach as low as -50$^{O}$c, and much of the land is permafrost).

China's Ministry of Forestry is the major organization responsible for almost all aspects of forestry and forest management. The forest policy goal is to have 20 percent of the country's area forested by the year 2000. Thus, an estimated 70 million hectares must be planted over the next 15 years at an average planting rate of 3.5 million hectares per year.

An estimated 28 million hectares of forest cover has been reforested since 1949. Afforestation efforts have not always been effective, however, due to the poor survival rate for planted trees. Silviculture and management practices in general are improving as the Chinese learn more about their forests.

Future growth is also centred on two other areas which require technological upgrading: (1) research institutions are focusing on improved forest yields and the development of products, such as medium-density fibreboard, that will stretch the resource; (2) China is upgrading existing machinery and management systems in manufacturing plants to improve recovery and production capability. Currently, forest products manufacturing is characterized by large processing plants, which supply regional and national markets, and smaller plants spread throughout the country, which supply local markets. Generally, they are highly labour-intensive, relatively outdated, and not as safety-oriented as in the West. No machinery manufacturing capability is currently associated with China's forest industry.

China's anual timber harvest is about 200 million $m^3$, of which ony about 25 percent is industrial timber. The remainder is utilized as fuelwood. British Columbia, in comparison, had an annual timber harvest (all used as industrial timber) of 70-75 million $m^3$, 1.5 times as large.

China's annual lumber production is 16-20 million $m^3$. British Columbia, in comparison, has an annual lumber production of 25-29 million $m^3$, again about 1.5 times as great.

China's 1981 plywood production is estimated at 350,000 $m^3$. In comparison, British Columbia in the same year produced 1.7 million $m^3$ of plywood - or about 5 times as much.

China's domestic demand for timber products continues to outstrip steady increases in production. Although industrial timber production grew steadily from 46.7 million $m^3$ in 1980 to 48.8 million $m^3$ in 1982, domestic demand increased 7 percent over this period, necessitating increased imports.

In particular, China has recently stepped up log imports considerably. The country imported about 1.1 million $m^3$ of coniferous logs in 1981. Sources included the U.S. (91 percent), Indonesia (4 percent), Chile (3 percent), New Zealand (2 percent), and Canada (less than 1 percent). By 1983 raw log sales from Canada alone had increased to 640 million $ft.^3$ and were valued at US $45 million.

China's lumber imports totaled about 1.5 million $m^3$ in 1981, much of which was non-coniferous lumber from Southeast Asia. Canadian lumber exports to China (all from British Columbia) in 1981 were about 40,000 $m^3$, valued at Cdn $4.2 million. By comparison, the U.S. exported about Cdn. $12.0 million of lumber to China that same year. In 1983, however, Canada's sales to China increased to 120 million board feet of lumber.

Over the past eight years, Canada has made impressive progress in raising its forest-product sales to China. The PRC now represents Canada's fourth largest overseas lumber customer. It is expected to continue to be a considerable market for British Columbia wood products in the foreseeable future. With increased economic expansion, substantially greater domestic demand for China's wood products is anticipated. (Currently, the nation is experiencing a scarcity of wood and paper products. Along with substantial reliance on imports, substitutes such as various metals, concrete, plastics, and organic products will continue to be used).

In addition to opportunities for exports of Canadian wood products, China's commitment to develop its forest resources has created a need for foreign technology and equipment imports in forestry and related industries and services. Prospects for trade and cooperation appear good, particularly in the area of consulting services including mill design, forestry engineering, and forest management.

## MANUFACTURING

Since 1949, China's manufacturing industries have made enormous advances. Gross industrial output has increased in real terms more than 40 times, at an average growth rate of 11.1 percent annually. China is one of few countries in the world that have sustained growth rates as high as 10 percent per annum for more than 20 years. By comparison, over the period 1968-78 India and the lower-income countries, as a group, expanded their industrial sectors at about 5 percent per annum, and middle-income countries had a median growth rate of about 7.5 percent per annum.

Rapid progress, and the peculiar Chinese relative price structure make China's industrial sector appear unusually large relative to the rest of the economy. Manufacturing alone accounts for about 35 percent of GDP.

Despite many weaknesses, China's manufacturing sector produces a remarkable range of products and has impressive capabilities. In terms of total industrial output, the nation ranks among the world's major industrial countries. In 1979, in terms of quantity produced, China led the world in output of cotton yarns and fabric. It ranked third in output of cement and suplphuric acid, fifth in steel, and its output of radios was second only to that of Hong Kong.

Since the economic readjustment program in 1979, China has strongly emphasized production of consumer goods. Over the period 1979-1981, the ratio of light industry (consumer goods) to heavy industry improved from 43:57 percent to 51:49 percent. Consumer goods and textile industries, buoyed by the new trade policies and by expanding domestic demand, have since recorded impressive growth.

The emphasis on consumer goods production has remained strong. In 1984, while heavy industrial products such as machine tools, crude oil, and rolled steel grew by a respectable 8-10 percent, those industries with the highest percentage increases were the consumer goods industries: automobiles increased 31 percent; beer 34 percent; television sets 45 percent; washing machines 58 percent; and refrigerators 185 percent. This trend is expected to continue.

The industrial sector as a whole is hampered by general infrastructure problems. Between 20-30 percent of industrial capacity remains idle at any given time due to electricity shortages. Inadequate transportation facilities, especially the railways and ports, slow the movement of energy supplies and raw materials required by industry. The general level of machinery and technology in China's 400,000 State enterprises is also inferior.

Thus, development plans for 1986-1990 involve the large-scale technical transformation of many industries. Major importance is attached to the introduction of key equipment and production lines. This is especially important in export-oriented industries with high foreign-exchange generating capacities. These include the textile, food, packaging, machinery, electronics, chemical, and pharmaceutical industries. The Special Economic Zones, considered crucial to improved overall industrial performance, are targeted to absorb foreign technology and equipment in these key industries. Industries with good potential for technology transfer and economic cooperation with Canada are discussed below.

## Food Processing

China's food processing industry is its third largest industrial sector, next to the machine-building and textile industries (the volume of canned food exports alone amounted to 356,000 tons in 1980, earning US $310 million in foreign exchange).

The country has a vast foodstuffs market and ample resources for development. Current food-processing capacity is fairly small, and domestic consumers are unaccustomed to using processed food. As living standards have increased, however, there has been a growing demand for improvements in diet (in terms of nutritive value and hygienic standards). This has put pressure on the industry to expand.

Development plans include a four-fold increase in production over 1980 by the end of this century, necessitating an annual growth rate of 8.2 percent. China plans to develop a full range of fast foods and mechanize the production of traditional food. The soft drink industry will be developed in large cities and tourist centres, and concentrated fruit juice factories will be constructed in fruit producing areas. In the dairy industry, fresh milk production and production of milk-based drinks as well as factories for milk powder processing and dairy products will be set up in the cities. In the canning industry, the large-scale import of high frequency electric welded can equipment, and technology for making snap-open and four-threaded cans and bottles is planned. In the brewing industry, the production of wines with low alcohol content and high nutritive value will be developed. As well, high efficiency, continuous fermentation technology, key production equipment, and technology capable of producing 100,000 tonnes of beer annually, will be imported. (There are 170 breweries in China which produced 910,000 tons of beer in 1981. Qingdao beer has been exported in sizable quantities and is available in major Canadian cities). Investment opportunities are available for Canadians in these important areas of food processing.

## Pulp and Paper

There are more than 500 varieties of machine-made paper produced in China and the annual growth rate of paper production has been 7.3% since 1981. But production still cannot meet domestic demand. China imports about one million tonnes of pulp and paper every year. The paper shortage is a constraint on the trade sector in particular since the production of packaging material for export goods is insufficient.

The shortage of pulp and paper supplies is due to a serious deforestation problem and backward technology. Only 20 percent of paper pulp is made of wood. Grass fibre material accounts for the remaining 80 percent. Technology for producing grass pulp, therefore, has developed rapidly, and China has successfully produced magnesium sulphate, reed pulp, bagasse pulp, and sulphate reed pulp. Technology in imide pulping, semi-chemical pulping, and anthraquinone pulping has been developed as well.

The country's paper mills number over 1,500, with a combined production capacity of 45.4 million tons per year. Output of machine-made paper, including newsprint, cigarette tissue, tracing paper, copying paper, etc., was 5 million tons in 1980. In the near future, China plans to import new technology and equipment for the paper industry. Four development priorities are: more efficient use of energy resources in production; a reduction of the amount of fibre and chemical material used as inputs; increased product variety; and pollution control. Foreign technology is planned to be absorbed through joint ventures and technical cooperation.

There appears to be good potential for the Canadian forest industry to participate in joint venture and co-production projects in the Chinese forest products industry. Potential areas of cooperation include forest management; pulp and paper mill operation and management; and technical upgrading to sawmills, linerboard and particleboard plants.

## Pharmaceutical and Medical Instruments

In the past two decades, China has developed a fairly complete pharmaceuticals industry. There are now nearly 700 pharmaceutical plants which employ 330,000 people.

Future plans for this industry include intensified research and development with advanced technology, especially in the area of patent medicines production. The production of composite packaging materials will be improved, especially the quality of packaging glass, tubes, and capsules.

In the category of medical instruments and apparatus, 255 special factories produce more than 1,500 types and 5,000 different specifications of medical equipment. The utilization of foreign capital and introduction of technology will be the focus of technical improvement in these enterprises in the future. China plans to purchase patents for manufacturing techniques of key parts, components and equipment, and import complete sets of parts for assembly in cooperation with foreign enterprises. About 60 projects are to be introduced which involve production of a wide range of medical apparatus and equipment.

Due to the particular features of medical instruments and equipment (i.e. great variety, low-batch quantity, and high quality requirements), the Chinese employ many varied ways of utilizing foreign capital and technology in this sector. They include joint venture, cooperative production, compensation trade, technology transfer, processing imported materials, and assembling imported parts.

## Photosensitive Materials

China produces materials used in photography, cinematography, telecommunications, medical treatment, printing, metal defect detecting, surveying, drawing, prospecting, national defence, image information, recording, industrial technology, and scientific research. The industry is currently seeking advanced technology and equipment to improve technical levels in the production of: plastic coated, paper base, colour reversal film; high temperature, quick developing, low-silver X-ray film; rare earth sensitizing screens for radiography; seismic microfilm; black and white meteorological cloud telephotographic paper; and ultraviolet ray oscillograph papers. Substantial potential exists for Canadian firms in this industry to offer technology and equipment to China through industrial cooperation agreements.

## Power Generating Equipment

China produces condenser-type turbo-generating units with capacities ranging from 6,000 kilowatts to 300,000 kilowatts; back-pressure extraction generating units with capacities ranging from 12,000 kilowatts to 50,000 kilowatts; geothermal plants with capacities ranging from 1,000 kilowatts to 3,000 kilowatts; and hydropower equipment of which generating equipment accounts for 18 million kilowatts. Technological gaps exist, particularly in the area of power generating equipment and transmission technology. The country is still backward in the design and production of high-VA transformers and circuit breakers. In the area of direct current transmission, there are serious difficulties in the technology of converters, especially high current, high voltage thyristors.

## Machine Building

The machine building sector produces motor vehicles, mining equipment, machine tools, instruments and meters, measuring instruments and cutting tools, power generating equipment, and bearings. The industry is nearly self-sufficient and supplies complete sets of equipment for agricultural, industrial, transportation, national defence, and scientific purposes.

China produces 13 main categories of farm machinery. They include tractors, hand tractors, internal combustion engines, tractor-drawn farm implements, harvesters, machines for animal husbandry, drainage and irrigation machines, machines for plant protection, transport equipment, threshing machines, processing machines for farm produce and sideline products, spare parts for tractors and internal combustion engines and semi-mechanized farm machines, and implements. The country is committed to modernize agricultural technology. There are currently substantial opportunities for Canadian farm equipment and machinery manufacturers to participate in expansion and development programs.

China is working to greatly increase exports of machinery and equipment and expects to produce machinery of advanced technological levels for nearly all sectors of the economy by 1990. Currently, it exports 130 types of machinery to more than 130 countries, including Canada.

## Heavy Mining Equipment

This industry comprises about 300 plants equipped with large heat-treatment systems, heavy machine tools, and welding and assembly workshops. A variety of heavy equipment is produced both for general and special purposes. The major product lines are: metallurgical equipment for iron smelting, steelmaking, coking and steel rolling, and the manufacture and rolling of non-ferrous metals; mining equipment for ore extraction, dressing and coal washing; bridge, gantry, traveling, and cable cranes; belt, screw, and scraper conveyors; equipment for cement, brick and tile production; and structural parts for building construction.

Note: Information on the mining industry as a whole begins on Page 67.

## Leather

China has a comprehensive leather industry including tanneries; leather shoes, fur and leather products factories; and leather chemicals and leather machinery plants. In 1980 the value of total output in the leather industry reached Rmb 3.4 billion and earned US $300 million in foreign exchange. The country has been seeking foreign technology and management expertise in order to improve productivity and product quality. Canadian leather goods manufacturers may be successful in co-production, joint ventures, and export processing opportunities.

## Motor Vehicles

China produces only 0.4 percent of the world output of vehicles. In 1981, the industry produced 286,000 vehicles, of which 108,000 were trucks and 133,000 motorcycles. In that same year, there were nine major motor vehicle plants producing highway trucks, military cross-country trucks, dump trucks, tractor trucks, buses and cars. The industry is planned to develop rapidly in the near future. In collaboration with foreign joint venture partners and using imported high technology equipment, new models are to be developed and manufactured for export. This will require foreign manufacturing technology on engines, power transmission, running gear, vehicle control systems, and cabs and basic components.

## Aircraft Production

China's aviation industry has successfully integrated domestically produced materials and parts in its serial production of aircraft engines and airplanes. A large number of aircraft, aircraft engines, and aircraft equipment factories produce trainers, small planes, fighters, bombers, helicopters, and transporters. Trade and technical exchange programs with numerous aeronautical research institutes and manufacturers have been established in more than 40 countries, including Canada. Technological cooperation and joint production offer long-term business opportunities to foreign partners in this area of manufacturing.

## ENERGY

China ranks third in the world in terms of both energy resources and primary energy production. Over the period 1965-83 the country's energy output increased from 232 to 715 million tons. Electricity production grew rapidly from 67.6 to 351.4 billion kwh and coal, which provides 70 percent of the country's energy, increased in output from 232 to 715 million tons. Oil production also increased significantly, from 11 million tonnes in 1965 to 106 million tonnes in 1980. China is today one of the major world oil producers and a significant oil exporter. Oil exports, the largest commodity export by value, provide about $4 billion in foreign exchange.

Despite rapid expansion, the country's energy supply is still very inadequate. Due to shortages, 20 percent of industrial capacity remains idle and about 50 percent of rural Chinese families, approximately 300 million people, are without electricity. There is a great lack of installed capacity, a problem worsened by severe bottlenecks in fuel transportation. (Railway capacity is inadequate, and significant technological gaps exist in the areas of electricity generation and transmission). Inefficient energy usage is also a major difficulty. Much of China's highly energy-intensive industrial sector involves outdated production systems which waste fuel and electricity.

Energy's performance is the most crucial constraint to industrial modernization in China today. Rapid development of this sector is needed to promote agricultural mechanization, railway transport, and manufacturing. Thus, intensive investment in energy exploration and exploitation is ongoing and expected to continue until the end of the century.

China's near-term plans for energy investment involve redoubled efforts to tap coal and hydro resources while allowing oil's relative contribution to domestic consumption to decline. Annual production of coal is increasing at 1.8-3 percent annually during 1982-87. It is hoped this will sustain an average 1-2 percent increase in overall energy production. China also plans to construct a number of high-efficiency mine-site thermal power plants to handle increased coal exploitation. A number are also planned for construction at coastal ports and railway hubs.

While China has recently increased investment in fuel exploration and energy plant construction, the most vital determinant of development is the country's ability to increase technical competence in fuel extraction, processing, transportation, power generation, and distribution. It is expected that the energy sector will attract and absorb large quantities of foreign technology and investment in these related areas. China is now considering selling bond issues in special energy projects both domestically and abroad.

## Hydroelectric Power

China has an abundant, exploitable hydropower potential of 378 GW. To date, only a fraction of this resource has been utilized (4.5 percent in 1983). In 1983 installed hydropower capacity totaled 24,000 MW, hydroelectricity generated amounted to 86.36 Twh, and the share of hydropower in the country's total installed capacity and total electricity generation reached 31 percent and 24.6 percent respectively.

An intensive program is currently underway to develop China's hydropower resources. The scale of construction is increasing, and scientific improvements are being applied to new construction. Many different types of dams are being built. The largest hydropower project now under construction is the run-of-the-river type Gezhouba Hydropower Station in the middle reaches of the Yangtze River. It will have an installed capacity of 2715 MW. The largest underground hydropower station under construction is the Baishan Power Station whose installed capacity will be 900 MW in the first stage.

Development plans also include significant investment in small rural hydro stations. Currently there are over 90,000 small stations in rural China with a combined installed capacity of 6800 MW. (Each station has an installed capacity of between 40 and 60 kilowatts.) Collectively, they provide about one-third of the energy required for agricultural production. As these stations greatly facilitate irrigation and rural electrification, many more are planned for construction in the future.

Current problems of power station construction in China are related to geology, hydrology, meteorology, reservoir-induced seismicity, and engineering protection.

## Thermal Power

Fossil fuelled power dominates energy production in China, a situation not expected to change in the foreseeable future. Currently there are about 120 fossil stations rated at 30 megawatts or more which, together, provide some 70 percent of national electricity production. Coal is the principal fuel and in 1983 accounted for 78.3 percent of thermal power generation. Oil accounted for 21.7 percent, a figure which is expected to decline over the near future. Due to oil's huge foreign exchange-generating capacity as an export, intense efforts are being made to lower domestic oil consumption, and most new thermal power stations are to be non-oil burning.

The thermal power industry has long suffered from under-investment in the coal sector. Coal extraction and railway transportation capacity are currently inadequate. New plans for thermal power emphasize developments in areas such as the modernization of existing mines and new open pit construction.

Further development involves upgrading the technical and economic efficiency of thermal power plants. The average net coal rate was 434 g/kwh in 1983 corresponding to a net generation efficiency of 28.3 percent. The low generation efficiency is due to the more than 12,000 MW of old, low and medium-pressure units of small capacity, with an average net coal rate of over 550 g/kwh.

Concern has recently focused on problems of sulphur dioxide pollution abatement. Most power plants use wet type or mechanical dust separators with an average efficiency of about 80 percent. Only a few utilize electrostatic precipitators. Thus, atmospheric pollution caused by thermal power plants is a major problem. The use of huge chimneys (180-240 m) is the main method of sulphur dioxide pollution abatement.

An important measure in energy conservation is the construction of co-generation (heat and power combined) stations for supplying process steam to industrial enterprises and hot water for district heating. Currently the total capacity of co-generation power plants exceeds 4400 MW. Many more are planned.

## Nuclear Power

China is richly endowed with uranium deposits and possesses 0.8 megatonnes of the world's proven reserves of 3 megatonnes. Intense investment in nuclear power development is too capital intensive to be feasible at this time. Also, few regions of China can be regarded as essentially non-seismic. Nevertheless, two nuclear power projects are currently under construction in the south-east where both fossil fuel resources and water power potential are lacking. Construction of the 300 MW nuclear pilot project is now in full swing and the other nuclear power project, with two 900 MW units, is about to be started in Guangdong Province. Meanwhile, preparations are beginning for larger nuclear power plant construction in east and northeast China.

## Power Networks

China has 24 power grids connecting stations with a combined generating capacity of 85 percent of the country's total. High voltage transmission lines are being rapidly introduced along with the construction of large hydropower and mine mouth thermal stations. As well, the original small dispersed grids are being gradually interconnected to form large regional power networks.

Since China's water power resources are mostly located in the western part of the country, and large load requirements are principally located in the east, electricity transmission inevitably travels eastward from the west. A number of extra-high voltage AC or DC transmission lines over 1000 kilometres in length are needed. These, together with the sub-stations and distribution and communication facilities, are planned in order to form a country-wide power network.

With the input of much imported technology and equipment, the reliability of the power system is slowly being increased. Major developments include China's first 500 KV, AC, transmission line, with a length of 595 kilometres, which connects the mine-mouth thermal plant in Henan Province with the large hydropower station in Hubei Province. Commissioned in early 1982, it has a transmission capacity of 700 MW. Another 500 KV line in the northeast network, with a length of 1.1 thousand kilometres and a 220 KV line of 33.5 thousand kilometres, has been under trial operation since late 1983.

Canadian involvement in this development includes services provided by B.C. Hydro and financed by the World Bank. Under contract to China the company is providing advisory services and training to assist construction of a 600 kilometre-long 500 KV transmission line from Xuzhou to Shanghai.

B.C. Hydro is also participating in a CIDA-sponsored program of technology transfer to upgrade electrical research and development facilities in many of China's provinces. Hydro is providing the project management and other Canadian utility companies are contributing in related areas as well.

China's main 220-500 kV transmission lines have been equipped with quick-acting distance relay and carrier current protection, automatic reclosers, fault recorders, and other automatic devices. Most large dispatching centres have been equipped with telemetering, telesignalling, CRT display, and other control techniques to monitor the main power stations and sub-stations.

Technological gaps still exist in the areas of electricity generation and transmission. For example, China is still backward in the design and production of high voltage transformers and circuit breakers. Another major deficiency is the technology of converters, especially high current, high voltage thyristors.

## Energy

### ENERGY PRODUCTION AND ITS COMPOSITION

(Equivalent to standard fuel at 7,000 cal/kg)

| | 1965 | 1978 | 1982 | 1983 |
|---|---|---|---|---|
| Energy production (million tons) | 188.24 | 627.70 | 667.72 | 612.63 |
| Composition (%) | | | | |
| Coal | 88.0 | 70.3 | 71.2 | 71.6 |
| Crude oil | 8.6 | 23.7 | 21.9 | 21.3 |
| Natural gas | 0.8 | 2.9 | 2.4 | 2.3 |
| Hydropower | 2.6 | 3.1 | 4.5 | 4.8 |

(Equivalent to standard fuel at 7,000 cal/kg)

| | 1965 | 1978 | 1982 | 1983 |
|---|---|---|---|---|
| Domestic energy consumption (million tons) | 189.01 | 571.44 | 619.37 | 656.48 |
| Composition (%) | | | | |
| Coal | 86.4 | 70.7 | 73.9 | 73.7 |
| Crude oil | 10.3 | 22.7 | 18.7 | 18.6 |
| Natural gas | 0.6 | 3.2 | 2.6 | 2.5 |
| Hydropower | 2.7 | 3.4 | 4.9 | 5.3 |

Source: The State Statistical Bureau, 1984.

## TRANSPORTATION

China's transportation sector is vital to the economy. It handles nationwide supplies of agricultural produce, merchandise, and raw materials, serves the needs of the country's huge energy industry, and provides crucial intrastructure for the growing import/export trade. Deficiencies in this sector are major obstacles to modernization, inhibiting industrial growth and the expansion of foreign trade.

The transportation sector is deficient both in terms of its capacity and level of technology and management. Prior tothe Open Door Policy in 1979, transportation was oriented to the movement of domestic supplies of essential imports such as grain. The evolution of the Chinese economy toward greater dependence on foreign trade has strained existing facilities. As a result, China is devoting massive resources to the development of crucial aspects of transportation. Many foreign firms have become involved in this effort and there has been substantial funding from the World Bank.

In view of the geographic similarities of Canada and China, transportation is considered to hold many opportunities for Sino-Canadian economic cooperation. In such areas as engineering and management expertise, and in the transfer of modern technology and equipment, it is expected that Canadians will greatly assist China's development in this sector.

### Railway Transport

China's huge railway system transports coal, agricultural supplies, industrial raw materials, and passengers. The dominant form of transport, it carries 60 per cent of all passenger transport, and 70 per cent of all freight. In terms of freight transport density, China ranks second in the world next to the U.S.S.R. Rail freight volume has risen 30 fold since 1979, while track length has expanded by a factor of only 2.3. As a result, current railway capacity is grossly inadequate and in some key sectors of the network, meets only 50 per cent of demand.

Rapid expansion and modernization of the railway is crucial to the growth of China's export oriented industries and industrial growth. It is expected that by the year 2000 the volume of passenger traffic will reach 2.5 billion people, and freight, 2.5 billion tonnes annually. In addition to this heavy projected demand, the coal industry, which supplies 80 per cent of the country's thermal power, has crucial transport requirements which are not being met. As China's railways still carry the burden of inland traffic, in some economic sectors and industrial regions the situation is most serious.

In addition to a lack of capacity, problems include obsolete technology and equipment, and poor management. For example, railway control and signaling are still manual and this greatly hinders the speed and efficiency of traffic flow.

Major goals for railway modernization include increasing the number of east-west lines to facilitate transport from the coal-producing bases centered in the West to industrial areas and ports on the eastern coast. China would like to complete this connection of hinterlands to seaports before 1990, and is currently constructing new lines and renovating existing ones through double-tracking and electrification.

Due to the high traffic density, there is a heavy burden on track maintenance. Machines have been designed and built for tamping, levelling and lining the track and a track recording car has been in service for some years. Mechanization continues to be sought in maintenance procedures and diagnosis. Technology transfer from abroad is very probable in this area.

As well as the purchase of foreign technology, equipment, and expertise, plans for railway modernization include utilizating foreign capital. Recently China financed railway construction with Japanese loans and is carrying out further construction with loans from the World Bank.

## Roads and Highways

Traditional means of transportation are still highly visible everywhere in China. Animal carts are still a predominant mode of transportation for many people.

At the end of 1983 the country's total highway mileage was 915,000 kilometres. The highway network fans out from Beijing linking Shanghai, Tianjin, and various provinces and autonomous regions. All counties in China, (more than 2000), as well as most towns and villages are accessible by highways.

Highway transport capacity lags far behind the needs of the growing economy. During the past two years, demands on highway transport have risen tremendously as industrialization and foreign trade increased. The State's recent decision to open fourteen coastal cities to foreign trade and investment has created even stronger demands for an upgraded highway network. A recent decision granting permission to China's 800 million peasants for private car ownership indicates that the use of motorized vehicles may grow even more sharply in the future.

In anticipation of this, priorities for road transport development include further construction of modern (paved) highways, bridges and expressways. Since 1979 short-distance container transportation service has operated between railway stations, wharves, factories and warehouses. International container transfer stations are now planned for construction in major cities to cater to the requirements of coastal cities, energy bases, and industrial centres.

China intends to develop heavy-duty, high efficiency motor-vehicles and will import advanced technology, especially engineering and managerial expertise, to carry out these plans. Foreign capital will be sought to assist future highway construction.

## Air Transport

The Civil Aviation Administration of China (CAAC) now operates over 166 routes within the country and links more than 80 principal cities. There are direct flights between Beijing, and the capitals of all provinces and autonomous regions. The CAAC also flies on about 20 international routes and has conducted traffic agreements with over 30 nations, and business contracts with more than 180 airlines. It has regular air service to Pyonyang, Bangkok, Manila, Paris, Frankfurt, London, Rangoon, Moscow, Tokyo, Karachi, Tehran, Bucharest, Bombay, Athens, Geneva, Zurich, San Francisco, New York, Addis Ababa, and other cities in 18 countries around the world. The Beijing airport has more than 60 scheduled international flights every week.

Airline routes total 348,000 kilometres (of which 146,100 kilometres are domestic flights.) In 1981, the volume of air freight reached 170 million ton-kilometres, and passenger service was 5 million person-kilometres.

China has four major international airports all equipped to handle modern aircraft. They are located in Beijing, Shanghai, Guangzhou, and Urumqui. The Urumqui airport has become an important air link between China and Central Asia, Europe and Africa.

Over the next two years the CAAC will give up its operational role but continue to regulate civilian air travel. The State has decided to divide the CAAC into four airlines and one helicopter service company. The new airlines will be: the Beijing-based Air China, which will handle international and major domestic services to Shanghai, Canton and Hongkong; the Shanghai-based China Eastern Airways, which will begin with major domestic routes and eventually go international (when it does, a new airline will take over its domestic routes.); the Canton-based China Southern Airways; the Chengdu-based Southwestern Airways; and the China Capital Helicopter Service, which will serve offshore oil exploration in the South China Sea. This new organizational structure will contribute to improved, more competitive airline services.

A significant development in the air transport sector is the new authority granted to provincial governments to buy aircraft, and construct airports and service facilities. With the deregulation of the CAAC, this has created a potentially vast market for foreign aircraft manufacturers. Also the new airlines are empowered to invest their profits in future development and acquisition programs (although final authorization for large aircraft purchases will still rest with central authorities in Beijing).

China's Domestic aviation market has been growing at a healthy 10-15 percent annually. In light of this, virtually all the major foreign aircraft manufacturers have made extensive demonstration flights in China in order to secure some portion of the aircraft sales and manufacturing market. (At present the CAAC operates a fleet comprising Boeing 747's, 737's, and 707's, British Aerospace Tridents, McDonnell Douglas MD80's, as well as very old Soviet aircraft.) Long term business development opportunities may also exist in the areas of technological cooperation and joint production of aircraft engines and parts. To increase foreign participation, China has established numerous trade and technical exchange programs with aeronautical research institutes and manufacturers in more than 40 countries including Canada.

## Seaports and Shipping

China has excellent natural conditions for the development of ocean transport. The country has a coastal area of more than 18,000 kilometres in which 20 major cities are located.

As foreign trade grows, total cargo handled by the seaports continues to rise. Recently this has greatly strained port and harbour facilities. (In 1983 Chinese seaports handled 249.52 million tonnes of import and export goods. This represents a 5.7 increase over cargo handled in 1982). There is a pressing need for larger, deeper harbour facilities, greater berthing capacity, and more efficient loading and unloading facilities.

China is currently supervising the construction of five new deep water ports, which will provide more berths for incoming foreign vessels and greatly increase the loading and unloading capacity for coal, mineral ores and containers.

A major focus of future port development is the fourteen coastal cities which, as part of the policy of opening to the world, have been created to attract foreign capital into China. Port and harbour modernization in these areas is crucial.

Specific plans for the period 1986-90 include the construction of modern communications centers to coordinate port and berth operations. Also, emphasis is being placed on constructing special purpose docks for the bulk transportation of coal, grain, timber, chemical fertilizers, and containers, training experts for modern port management and encouraging factories and enterprises to construct docks using joint-financing through joint ventures with foreign investors.

In 1982, the World Bank provided China with a $120 million loan to be used to modernize coal loading and unloading ports. China will utilize this loan to import the entire components of a coal port centre from Japan. The development will center in Huangpu port which is designed to handle 4 million tons of coal annually. Beijing plans to refit other existing ports in South China for coal collection and distribution. Foreign participation is sought for this modernization in the areas of engineering and port construction expertise, and financing.

China's ocean-going shipping fleet consists of more than 430 ships with a combined tonnage of about 8 million tons. It comprises passenger ships, bulk carriers, packed cargo ships, oil tankers, container ships and roll-on roll-off vessels. The ships call at more than 400 ports in 100 countries and regions, including Canada.

The China Ocean Shipping Company (COSCO), provides services to both Chinese and foreign firms in ocean transport. It offers a wide range of services which include booking shipping space, chartering ships, and leasing, manufacturing and buying containers. COSCO has overseas agents in various ports in Australia, Britain, Egypt, Japan, the Netherlands, and the United States.

Container shipping services are available at the Chinese ports of Tianjin, Shanghai, Qingdao, Huangpu and Dalian.

## COMMUNICATIONS

Since 1949, China's postal and telecommunications network has vastly improved. Over the last seven years especially, the scope of communications services has greatly expanded. Newest services include newspaper and journal circulation, conference telephone calls, telex, radio, and television programs transmission, and international express mail.

China's most significant advancement has been the establishment of three satellite earth stations in Beijing and Shanghai which connect with the Indian and Pacific region satellites of the INTELSAT system. China is now capable of establishing communications via satellite with all the countries of the world.

### Postal Services

Postal communications systems cover letter and parcel post, money remittances, newspaper and periodical subscriptions, as well as distribution. The total number of letter post items was over 3.5 billion in 1983. An "International Express Mail Service" has been established with some countries to meet the increasing needs of international and domestic customers.

Mechanization has been recently introduced. China has manufactured several kinds of mechanical postal equipment, including parcel posting, sorting machines and stamp vending equipment. More than 100 automatic parcel sorting devices have been installed in 34 cities. Nevertheless, postal techniques generally remain backward since postal items are still mainly handled manually.

International postal operations have also advanced. China now has postal contact with 111 countries and regions.

### Telecommunications

China's telecommunications network began with the construction of concentric cable and microwaves. The first 1,800 channel concentric cable carrier circuit was opened in June, 1976 between Beijing, Tianjin, and five other eastern Chinese cities. This facilitates automatic and semi-automatic long distance telephone dialing.

A Beijing-Guangzhou 1800 channel coaxial cable carrier system is expected to be established by 1985. It will be the main north-south communications artery for China's Beijing-centred telecommunications network, which is beginning to take shape. This network will consist of open wires, cables, microwave, and shortwave transmissions, and will serve most urban and rural areas. (Currently, over 14,000 kilometres of microwave links with 600- or 960-channel capacity have been completed.) To date, it links 26 provinces, autonomous regions, and municipalities for the transmission of telephone calls, telegrams, facsimiles, and radio and television programs. It has over 31,000 channels of long-distance telephone, telegram, and facsimile circuits of which 11 percent are automatic and semi-automatic long-distance telephone circuits.

A January, 1983 survey indicated that only one person in every 200 in China owns a telephone. (China is one of only six other countries having such a low number of telephones.) Because of this, telephone service even in the larger cities is extremely poor. In Beijing, for example, simple informational calls to many of China's prominent organizations can take longer than an hour to complete.

China is developing its international telecommunications system with the expansion of international exchanges. Relations have been established with 111 countries and regions for direct Indian and Pacific regions of the INTELSAT system. China currently has direct channels with 48 countries and transit connections with other countries via satellite. Thus, in comparison with 1978, international telephone traffic has increased 15 times as of 1983 by an average annual increase of 70 percent.

In 1981 the postal and telecommunications networks began providing telegram circuits to new computer centres across the country. (Data communications are now available between Beijing and 32 major iron and steel companies as well as the Planning Commissions of 28 provinces and regions.) Fourteen cities in China are now capable of handling international telex services. (There are telephone, telex, and telegram links between Canada and China.) Other significant improvements include direct telephone, telegram, customer special telegram, and photo facsimile circuits with 46 countries and regions, and direct long-distance telephone lines between Guangzhou, Foshan, Jiangmen, Zhongshan, and Hong Kong.

## The Media

Since 1978 China's newspapers have experienced a circulation increase of 78 percent. China's Xinhua News Agency has become one of the largest news distributors in the world, serving mainland China and 160 Chinese-language publications in Hong Kong, Macao, and overseas. More than 1,333 newspapers reach one out of every ten people in the country. Newspapers have improved, both in coverage and in circulation. This improvement is attributed mainly to the increased living standards experienced by most of China's population in the past five to seven years. Some 800 newspapers and periodicals are aimed solely at peasant readers.

Accordingly, China's schools of journalism have increased in importance. There are currently 120 journalism research institutes, and 26 colleges and universities offer journalism courses.

China is planning to ease restrictions on imports of foreign newspapers and periodicals. According to the National Publications Import and Export Corporation, the country already imports about 4 million issues of 30,000 overseas newspapers and periodicals valued at US $38 million in 1984.

Television news and information programs serve record numbers of Chinese citizens. The output of television sets has increased at an annual rate of 70 percent to 105 percent since 1980. The central broadcasting station broadcasts in Mandarin and five minority languages. "Radio Beijing," China's overseas radio service, broadcasts in 38 foreign languages.

China's most recent success in this area was the launching in April 1984 of the country's first experimental communications satellite. This satellite enables Xinjiang Province to receive the most current news from Beijing, more than 2,500 kilometres away.

## Development Plans

Since modern infrastructure is essential to Chinese industrial development, upgrading the communications sector is a strong priority. By the year 2000, China hopes to have established a modern post and telecommunications network to provide high-quality service. Another major focus of development is the telephone network. The number of telephones in use is planned to be greatly increased. SPC digital telephone exchange and digital transmission equipment will be employed in the major cities, and the use of cross bar telephone exchanges will be expanded in smaller cities and rural areas.

For long distance communications, China will develop optical fibre cable techniques, satellite communications and digital transmission on the basis of carrier frequency, cable communications, and microwave communications to form a mesh structure with large capacity, multiple routes and circuitous tandems. Currently, low- and medium-speed data communication services used in telex networks and public automatic telephone networks are in operation. Packing switching networks are now planned to enable the use of computers and other terminals with different bit rates, codes, and protocols to interface. New services such as video data transmissions and facsimile document transmission may be provided in the network.

Plans for the postal sector include improvements to transportation for letters and bulk mail. New postal centres will be constructed, and automatic and semi-automatic transmission and sorting facilities will be installed. A postal data processing system will be established to handle newspaper and periodical subscriptions and distribution.

The above objectives will be carried out in two stages, each lasting a decade. Over the period 1981-1990, the following major developments are planned:

- Facilities for local urban telephones, international telecommunications, domestic microwaves, and underground cable trunks will be increased. The capacity of urban telephone exchanges will be doubled. Openwire networks will be improved. Cable, microwave, optical fibre, satellite, open-circuit, and UHF techniques will be utilized.

- Special attention will be given to the construction of international telecommunications facilities in Beijing, Shanghai, and Guangzhou. Communications services in major coastal cities, ports, and other important cities will be improved. International telex and telephone services will be automated to create new services such as high-speed international facsimile, data transmission, videotex, and private line provision.

During this stage, China will utilize foreign technology in optical fibre and data communications, digital transmission, satellite communications, terminal equipment, and letter-sorting facilities.

The second stage of development covers the period 1991-2000. China's expectations include access to widespread advanced technology acquired (largely from abroad) over the period 1981-1990. By the year 2000, it is expected that domestic telex, facsimile, photo transmission, video telephones, conference television, video data transmission, and other modern services will be in operation.

China has singled out the following as potential areas of technological exchange and economic cooperation between Canada and China:

- satellite communications and earth station antennas;
- distance learning techniques;
- data communications and transmission products.

## MINERALS AND METALS

China has enormous mineral resource potential. It has the large resources necessary to become a major steel producer, (total reserves of iron ore are estimated at 8 to 100 billion tons), and coal, limestone, manganese, molybdenum, vanadium, and tungsten, are found in many areas. The country's non-ferrous metals resources are also abundant. Output in this sector totalled 1.07 million tons in 1982. China also has reserves of gold and silver, rare earth metals, and is a large producer of industrial non-metals such as barite, fluorspar, magnesite, salt and talc.

A major exporter of some minerals and metals, China's exports included crude oil and oil products (26.2 M ), coal (7.2 Mt), salt (1.0 Mt), antimony (16,727 t), and tungsten ore, (18,803 t) in 1984.

In general, however, China's mineral resources are far from being fully exploited, and present production levels fall far short of the needs of industrialization. Imports in 1984 included 5.7 Mt of iron ore, 12.0 Mt of steel products, 264,000 t of copper, 252,000 t of aluminum, 225,000 t of zinc, 851,351 t of soda ash, 3.0 Mt of cement and 2.4 Mt of coal.

An efficient transportation structure is a crucial requirement for further development in the mineral industry. This would open up the vast interior regions and provide coastal areas with facilities to transship materials necessary for industrialization. Exploration for new resources is continuing and ambitious goals have been set to verify reserves of iron ore, phosphorus, copper, bauxite, lead, zinc and tin. Until new development comes on stream, China will remain heavily dependent on imports of basic industrial metals to support domestic industry.

### Iron and Steel

China cannot become a major industrial power without a well-developed metallurgical industry. Construction of large industrial enterprises such as machine-building, transportation, and energy systems require large quantities of iron and steel. In general, China's steel output has made steady annual advances - from 12,800,000 tons in 1969 to 37,380,000 tons in 1983 - but, this is still inadequate for the needs of modernization. China must either import large quantities of raw, semi-finished, and finished steel products, or increase the capacity of domestic production by importing advanced equipment.

China's shift in emphasis from heavy to light industrial production did not significantly slow advances in steel industry output. Constraints on development in this industry include the still irrational economic structure, poor transport facilities, and a shortage of available energy. Also steps must be taken to increase investment in beneficiation for treatment since much of the country's iron ore is of inferior quality. Despite vast iron ore resources, substantial amounts of iron ore and pig iron must be imported to meet domestic needs.

By western standards, much of the coal China uses for coking is of inferior quality. It has an ash content of more than 15 percent , considerably higher than the level of 8 percent or less that is considered the maximum to produce good quality coking coal. However, the Chinese have made technological breakthroughs in the use of anthracite and local coals for steel production and this has reduced demand for coking coal in some regions by as much as 20 percent.

Technologically China's steel industry lags far behind those of the industrially developed countries. Introduction of advanced foreign technology into the industry is therefore of great importance. The country has imported mining, smelting, and processing equipment and plans to purchase more adaptable foreign technology to upgrade and expand existing steel works.

Future development in the iron and steel industry will upgrade the technology of existing enterprise, improve product quality and variety, reduce energy consumption, and emphasize pollution control. Efforts will also be made to develop and utilize mineral resources and increase efficiency in the processing of iron and steel products and coke chemicals.

## Coal

China has rich coal deposits. Verified reserves in 1981 were 640 billion tons. They include gas coal, coking coal, lignite, anthracite, and steam coal. Coal output in 1985 was approximately 800 million tons.

There are about 2,500 coal mining enterprises in China, of which 84 form the State-run centralized production distribution network. China must utilize substantial financial resources in order to develop the industry on a larger scale. Over the past few years the Ministry of Coal Industry has imported fully mechanized mining equipment, processing equipment for safety devices, washing equipment and equipment and instruments for research and education, worth over U.S. $1 billion. Significant foreign assistance is now being sought for economic and technical cooperation to upgrade technology and management. Required technology for import or co-production in the form of joint ventures include large equipment, and automatic control system technology for making safety devices. Over the past few years the Ministry of Coal Inudstry has imported fully mechanized mining equipment, processing equipment for safety devices, washing equipment and instruments for research and education worth over U.S. $1 billion.

## Non Ferrous Metals

As part of the move toward decentralization, the non-ferrous sector of China's mineral industry has been separated from the Ministry of Metallurgical Industries. The new China National Non-Ferrous Metal Industries Corporation (CNNC) has equal status to the Ministry, reporting directly to the State Council, but has a greater independence of action than a Ministry.

The CNNC is responsible for all non-ferrous activities, including precious metals, if they are by-products of non-ferrous operations. It conducts the export of non-ferrous metals and has established business relations with more than 100 firms and manufacturers in 38 countries. Some 160 import/export contracts have been concluded, and the volume of transactions is steadily growing. The original Ministry of Metallurgical Industries continues to be responsible for all iron and steel production, manganese production, and for refactory materials which are supplied to the steel industry.

Non-ferrous corporation branches are being established at the provincial level to help speed the decision-making process and simplify the negotiating procedure for foreign companies selling their services or setting up joint venture operations in China.

China has an abundant supply of non-ferrous mineral resources with the world's largest reserves of tungsten and antimony, and among the largest of copper, manganese, tin, molybdenum, mercury, lead-zinc, bauxite, copper-nickel, and chromic iron. The non-ferrous metals sector in China is made up of ten metals: aluminum, antimony, copper, lead magnesium, mercury, nickel, tin, titanium, and zinc. The industry has more than 700 non-ferrous metallurgical plants and mines, including 70 key enterprises. Their collective output of these ten metals was 1.07 million tons in 1982. Present production levels are far short of the needs of China's economy however and exploration for new resources is ongoing.

China's non-ferrous metals sector is already a fairly comprehensive industrial complex. It is supported by a scientific and technical force of 28 specialized design and research institutes, and 15 universities and colleges. The abundance of the country's non-ferrous mineral resources offers unique advantages to further develop the industry. Over the next 5-10 years development will be focused on: aluminum production as the first priority, followed by lead, zinc and copper production; technological transformation in a number of key enterprises; construction of a number of large-scale aluminum, lead-zinc, and copper production bases; establishment of a technical-economic research centre, and four other technical exploration centres to study the utilization of aluminum, titanium, and heavy metals; and giving priority to geological work, improving geological technology and equipment in order to develop comprehensive prospecting, locate new mining bases, and broaden prospective reserves. The level of mechanization throughout the industry will be increased.

Major technology imports are planned in the areas of mining, smelting, and processing. Major areas for the absorption of foreign funds are Northwest and Southwest China, which have abundant hydropower resources and mineral reserves. Within these regions, areas containing reserves of high grade lead-zinc and bauxite ores provide good environments for joint venture operations, co-exploration, and co-production.

# FINANCE

## Banking

The People's Bank of China is China's central bank. Until September 1983, it engaged in industrial and commercial credit and savings deposits. Today it performs only the functions of a central bank. These functions include issuing Renminbi (Rmb), (the sole currency in circulation in China), and setting the country's financial guidelines, foreign exchange rates, interest rates, credit and loan programs. As well, the central bank supervises the business activities of specialized banks and institutions.

The banking system was reorganized in 1978 to include the following specialized banks which provide a range of financing activities. It now includes:

- The People's Bank of China (the Central Bank)
- Industrial and Commercial Bank of China
- Agricultural Bank of China
- Bank of China
- People's Construction Bank of China
- People's Insurance Company of China
- China International Trust and Investment Corporation
- China Investment Bank
- State Administration of State Control

The branches of these institutions are under the leadership of their respective head offices and also supervised by the branch offices of the People's Bank of China. Each of these institutions functions independently within the business scope decided by the State and according to the current policies and plans of Government.

The State General Administration of Exchange Control (SAEC) and its branch offices are state organs responsible for the control of foreign exchange. Their functions include exercising unified control of China's foreign exchange, formulating exchange control decrees, and publishing exchange rates between the Rmb and foreign currencies. The State pursues a policy of centralized control and unified management of foreign exchange. The bank specializing in foreign exchange business for the State is the Bank of China. With the approval of the State General Administration of Exchange Control however, other banks and foreign institutions may also handle foreign exchange within a specified scope.

By April 1984, the folowing banks and institutions had been approved by the SAEC for foreign exchange dealings:

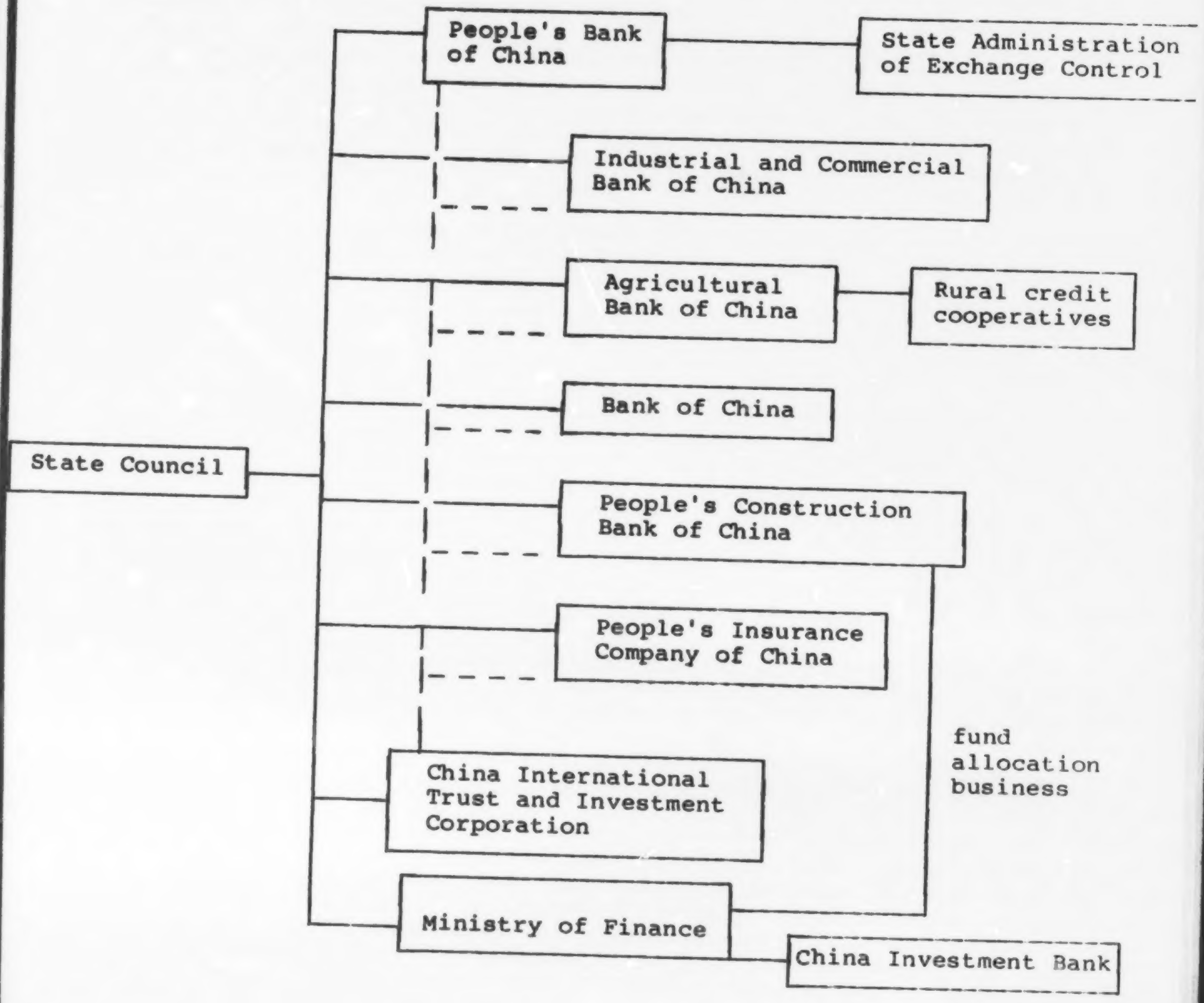
## Banks

- China Investment Bank
- Hong Kong and Shanghai Banking Corporation
- Standard Chartered Bank, Shanghai Branch
- Overseas Chinese Banking Corporation, Shanghai and Xiamen Branches
- Bank of East Asia Ltd., Shanghai Branch
- Nanyang Commercial Branch Bank Ltd., Shenzhen

## Financial Institutions

- China International Trust and Investment Corporation
- Shanghai Investment and Trust Corporation
- Tianjin International Trust and Investment Corporation
- Guangdong International Trust and Investment Corporation
- Fujian Investment and Enterprise Corporation
- Zhejiang International Trust and Investment Corporation
- Hubei International Trust and Investment Corporation
- Liaoning International Trust and Investment Corporation
- Bank of China Trust and Consultancy Company

Financial institutions of the People's Republic of China


People's Bank of China
State Administration of Exchange Control
Industrial and Commercial Bank of China
Agricultural Bank of China
Rural credit cooperatives
Bank of China
State Council
People's Construction Bank of China
People's Insurance Company of China
fund allocation business
China International Trust and Investment Corporation
Ministry of Finance
China Investment Bank

Source: The China Investment Guide, China International Economic Consultants Inc., Longman Group Ltd. 1984, p. 12.

The Bank of China, also under the State Council, specializes in foreign exchange business. It handles loans and deposits between international banks, overseas Chinese and other international remittances, foreign currency deposits and loans, and deposits and loans in Rmb related to foreign exchange operations, and the purchase and sale of foreign exchange and gold on international markets. It also engages in business involving trust, investment, lease, and consultation, issues foreign currency bonds and other securities, participates in international financial conferences, and signs agreements with foreign organizations and governments.

There are branches of the Bank of China and other state-private joint banks in Hong Kong and Macao, in Singapore, Luxembourg, Britain and the United States, and representative offices in Paris and Tokyo. The Bank of China also operates correspondent business with 3,151 banks in 149 countries and regions.

The Agricultural Bank of China, also directly under State control, specializes in agricultural credits and handles banking business for rural areas throughout the country. Working with numerous credit cooperatives, it forms a relatively complete rural financial system. It deals in various kinds of accounts and deposits in the rural areas, in agricultural loans, and loans for cooperatives. Additionally, it controls the working funds of the state-run agricultural enterprises and manages the funds specially allocated by the State to agriculture.

The Industrial and Commercial Bank of China, under State control, specializes in industrial and commercial credits and savings. It handles loans, deposits, and account settlements of industrial and commercial enterprises, as well as individual savings, and controls the working funds of state-run industrial and commercial enterprises.

In 1984 the Industrial and Commercial Bank of China was authorized to provide loans for compatriots from Hong Kong, Macao, Taiwan, and overseas Chinese who came to invest in development projects in the People's Republic. Projects eligible for such loans include mines, power stations, highways, bridges, railways, harbours, and forestry farms as well as infrastructural facilities in economic development zones. The terms of the loans will be one to 15 years with none exceeding 20 years. Preferential interest rates may also be granted.

The People's Construction Bank of China, under the State Council, deals with national capital construction and in managing state investment in fixed assets. It specializes in the business of fund allocation and loans for capital construction and related large-scale capital construction projects. As well, it provides loans, deposits and account settlements for building and installation enterprises, geological prospecting units and materials supply enterprises, and controls their working funds.

The China Investment Bank is a specialized bank authorized by the State to raise foreign construction funds for investment and credit business in China. It acts as an intermediate financial institution for the receipt of industrial loans from the World Bank and other international financial institutions. (China became a member of the International Monetary Fund and the World Bank in April 1980). It also obtains foreign funds through other channels for lending in foreign exchange or Rmb to small and medium-scale projects in domestic enterprises. The China Investment Bank allocates investment loans for Chinese-foreign joint ventures.

The China International Trust and Investment Corporation (CITIC) is an international financial institution under the direct leadership of the State Council. A business corporation with the status of a Ministry, it plays an important role in China's absorption and utilization of foreign funds, in international trade, and in the exchange of technology. Its functions are: to organize equity joint ventures, contractual joint ventures, compensation trade, and other forms of economic cooperation; to develop technical cooperation with foreign countries; to operate international financing, including trust investment, trust deposits, and floating debentures on international monetary markets; to handle imports and exports for joint ventures set up with CITIC investment; to deal in international and domestic leasing; to deal in real estate; to provide consultancy services; to provide insurance for foreign investment in China; and to act as an agency commissioned by its foreign and domestic clients.

CITIC is empowered to discuss all possible forms of cooperation and services with business people, bankers and industrialists.

## Foreign Participation in China's Banking System

Following the promulgation of the Open Door Policy, in line with greater participation in the world community, China strengthened contacts and relations with other countries in the international financial sphere. In April 1980, China was admitted to the International Monetary Fund and the World Bank, (the International Bank for Reconstruction and Development). The following year the World Bank announced a $200 million loan to China to finance science and engineering training and the purchase of advanced scientific research and equipment. From 1980 on, China also utilized foreign funds gained through low interest loans between governments, export credits, compensation trade, and joint ventures. It has signed credit agreements with Britain, France, Japan, Italy, West Germany, Sweden, Canada, Norway, Australia, Belgium and Argentina.

Canada established a $2.3 billion line of credit for China in 1979. Its purpose was to finance China's purchases of Canadian services and equipment. In October 1984, the line of credit was renewed for four years under a General Financing Protocol Agreement signed with the Bank of China. This protocol allows the EDC to make direct loans to the Bank of China and/or purchase promissory notes issued by a Chinese buyer and guaranteed by the Bank of China.

An estimated 72 foreign banks have representative offices on the Chinese mainland. The majority are located in Beijing. Four of the major Canadian banks are representated there as well. In addition to handling the EDC line of credit, Canadian banks offer strong programs of support in the area of informational resources and guidance to Canadian business people in China. In the future, their roles are expected to expand (as are those of all foreign banking institutions in China) to include greater support to joint venture projects and other commercial activities, the provision of funds for equipment imports and natural resource development, and the introduction of foreign investors to Chinese projects, i.e. by acting as brokers to provincial or regional government.

The Chinese have stated that they are not ready for the wide introduction of branch offices by foreign banks however. Until they gain experience in the field of banking, the Chinese Mainland will remain off limits for most foreign branch offices. Exceptions include the Hong Kong and Shanghai Banking Corporation and Chartered Bank in Shanghai, which were left over from the period previous to 1949. Beijing is, however, reviewing applications from foreign banks to locate in the Special Economic Zones.

The People's Insurance Company (PIC) is a State-run organization under the direction of the People's Bank of China. It handles domestic and foreign insurance and reinsurance business and operates two affiliated companies, The China Insurance Company Ltd. and the Taiping Insurance Company Ltd. These companies specialize in insurance business in Singapore, Hong Kong and Macao, and are jointly owned by the Chinese Government and private interests.

The People's Insurance Company was created in 1979 and has since undergone rapid expansion. Its assets total more than Rmb 700 million. (In 1980 alone, insurance premiums received from direct writings totalled Rmb 200 million). With the expansion of China's foreign trade activity in recent years, the PIC has greatly expanded its international business relations. With American investment it has established a Sino-American Insurance Company in New York and a liaison office in London. British, U.S. and Japanese insurance companies have set up a total of nine offices in Beijing. As well, the PIC has reinsurance business relations with more than 1,000 insurance or reinsurance companies in 120 countries and regions.

The PIC's insurance services include transportation, installation, construction, third party, properties of various types, employers' liabilities, and other insurance. Overseas insurance services include marine cargo hull insurance, international aviation insurance, motor vehicle insurance, and international reinsurance. The PIC acts as the Chinese agent for overseas insurance firms and the Protection and Indemnity Club of ship owners in assessing and examining damage occurring in China to ships, cargo or personnel, and files damage compensation claims. There are over 30 overseas PIC agents in more than 100 regions and countries.

## SCIENCE AND TECHNOLOGY

Through study and joint cooperation with other countries, China has reached advanced levels in many important scientific and technological areas, significantly, the synthesis of bovine insulin in 1965. Major achievements have also been made in the areas of agronomy and agrotechnology, earthquake forecasting and seismic engineering, computer and space technology.

In China today, most areas where applied science and technology could be employed and upgraded are characterized by a large base of grassroots technology. In medicine, "barefoot" doctors are still the skilled healers serving much of rural China. In agriculture, huge areas remain unmechanized and poorly irrigated. This base of grassroots expertise is spearheaded by a concentration of resources in specialized areas that have generally kept pace with the developed world.

Thus, China has achieved significant results in the science of crop breeding and selection, and conducted successful programs in biomedical research. (Subjects of study include nucleic acid chemistry, enzymology, virology and cancer pathology.) It has tested atom and hydrogen bombs and guided missiles, sent satellites into orbit, and launched carrier rockets from land and underwater.

At the basic level however, the lack of up-to-date technology is acute. Areas of greatest inadequacy are the "bottleneck" sectors - energy, transportation, communications and manufacturing. This lack of infrastructure is a tremendous constraint on modernization. Technological gaps have caused a crucial imbalance among economic sectors. Specific problems identified by the Chinese are as follows: a weak industrial foundation, underdeveloped commodity production and inefficient and wasteful energy usage, the result being a general lack of absorptive capacity for new technology throughout the economy.

The development of science and technology has thus become a priority for China over the next 10 to 15 years. Vigorous and concentrated efforts are now being made to overcome significant constraints to successful technological growth.

Due to the repression of intellectuals which took place during the Cultural Revolution (1966-76), China suffers an acute lack of qualified professionals, teachers, technicians, engineers and scientists. To remedy the problem, the State is promoting scientific education and has reinstituted the National Science Award and Invention Award for major achievements. For the past 5 to 6 years it has maintained an extensive student exchange program in which Canada, the U.S., and Britain have played significant roles. Since ultimately, China wants to rely on its own scientists to generate new knowledge, 80 percent of these students study subjects related to science and technology.

A further constraint to technological advancement has been the State's identification of research priorities which lack relation or application to industrial and economic need. Few individual enterprises currently have facilities for research and development. As a result, too many resources have been concentrated on pure (rather than applied) science and on topics considered fashionable. (Today in China, there are 980 research groups engaged in the study of haploid seeding breeding). Although China is making efforts to orient research to long-term economic applications, currently only 10 percent of research results can be used in production.

Further constraining technological development is the country's lack of absorptive capacity and limited foreign exchange reserves. In consequence, China can introduce only a small number of techniques which require concentrated funds and large energy resources. For this reason, there is less emphasis on building new enterprises and a focus toward improving existing plants. Current requirements for technology imports, therefore, no longer include complete sets of equipment but rather, applied techniques, designs, and plans for use in existing enterprise. They include single item techniques, manufacturing and management expertise, testing meters and instruments, technological processes, and some sample machinery. Preferred imports are small-scale, low-cost systems which introduce advanced techniques that can be applied throughout China. Ideally, they are highly labour-intensive and conserve both raw materials and energy.

Despite China's explicit demands within the category of foreign technology imports, Canada is well placed to contribute in some specialized areas of science and technology. This includes assistance to China in the following areas:

## Agriculture

In line with agriculture's economic importance, a large amount of total research investment has been in agronomy and agrotechnology. This trend will continue until a reasonable level of self-sufficiency in food production is attained. Research has focused on rice and wheat, the almost universal objective being early plant maturity to facilitate multiple cropping. Included for study as well are the sciences of crop breeding and protection, fertilizer application and production, irrigation, forestry, and desert control. At present it is felt that unless fundamental breakthroughs are experienced in agricultural science and technology, the necessary dramatic increase in crop yields cannot be brought about.

## Industry

In industry, technological gaps mostly affect mining capacity, the manufacturing of light industrial products, organization and management, and computer facilities. The degree of modernization of technical equipment varies widely and is an imbalance which cannot quickly be changed. Over the next 10 to 15 years China's industrial sector will remain technologically diverse, utilizing both advanced automatic and electronic techniques as well as semi-mechanized and traditional manual operations.

The Chinese have very recently made statements expressing their current need for western management and organizational expertise in order to implement the recently announced plans to reform urban industry and enterprise.

## Computer Technology

The lack of computer technology is a major factor inhibiting progress in many areas of Chinese industry and applied science. The development of peripheral units and research of language programing and operating systems has been neglected, the result being a 10 to 15 year gap with regard to peripherals and software, as well as human interfacing. This affects performance in the manufacturing, communications, transportation, and energy sectors, and slows research in the applied sciences, seismic studies, and the development of meteorology systems.

Recently there have been efforts to transfer manufacturing technology to the electronics sector. Three priority areas for investment are: large-scale integrated circuit production, military electronics, and computers, (especially small and micro-computers.) The Ministry of Electronics Bureau plans to
to import 550 types of advanced electronic equipment over the next five years for use in telecommunications, aerial surveillance and control, offshore oil and gas exploration, fibre optics, and the production of very large-scale integrated circuits.

Major efforts are being concentrated on research in solid-state digital electronics. Nearly half of the research divisions at the Chinese Institute of Physics currently specialize in areas related to solid-state electronics.

## Energy

China is currently upgrading the coal, oil and hydroelectric power industries in order to satisfy huge increases in energy demand. Technological gaps are most significant in the areas of fuel transportation, refining, and electrical power transmission.

In the oil sector, China has achieved all-round competence in onshore exploratory drilling and field production, but many of the techniques used are outdated. The weakest links include fuel transportation and refining - problems of insufficient investment capacity as opposed to a lack of expertise. In offshore oil production, drilling and extraction technologies are weak. As well, China requires expertise in offshore structural engineering, i.e. the study of seawater corrosion, platform and pipeline construction, sea waves, and thermally induced resonance phenomena.

The coal sector has suffered persistent underinvestment since the 1960's. China has already acquired the necessary expertise to design fully mechanized pits and to manufacture a range of modern mining equipment, but lacks capacity in some areas of coal extraction and transportation. Coal energy conversion, including gasification and liquefaction, is the newest growth area of research.

Electricity production is desperately inadequate. Technological gaps exist, particularly in power generation and major power station construction related to geology, hydrology, meteorology, reservoir-induced seismicity, and engineering protection. Electricity transmission technology is also poor. Nearly 15 percent of electricity is lost in generation and transmission. China is still backward in the design and production of high-VA transformers and circuit breakers and in the area of direct current transmission, a gap persists, the main difficulty being the technology of converters, especially high-current, high-voltage thyristors.

## Transportation and Communications

The most pressing problems in the transport sector are inadequate port and harbour facilities, and a great lack of capacity in the railway sector which transports huge quantities of coal. China is currently upgrading both aspects of transportation and views development in this bottleneck sector as crucial.

Top priority in the communications sector is to develop application satellite systems to build modern satellite telecommunications and meteorology systems. China recently launched an experimental communications satellite which has brought live news to the province of Xinjiang. In the area of space technology the Chinese have achieved four launchings of carrier rockets and are at the forefront in the area of orbital tracking. But many gaps in aspects of space technology need to be developed and improved. China has some experience in the use of meteorological satellites for weather forecasting and, so far, has applied remote sensing technology in land resource investigation, forest monitoring, regional geology, hydraulic survey, mineral exploration, seismology, and environment monitoring. The country has expressed a desire for cooperation and exchange with other countries in this strategic area of development. China's expertise in microwave technology is also inadequate. A microwave relay system now connects nearly all the major cities but is almost nonexistent between provincial towns.

## Earth Sciences

China is generally at the forefront of most scientific aspects of earthquake forecasting and has an impressive network of seismic stations. This area of applied science has traditionally been emphasized since no part of China can be regarded as essentially non-seismic. The country is capable of manufacturing a whole range of high-performance laser geodimeters, quartz for extensometers, quartz pendulum tiltmeters, strong-motion instruments, and long and short period seismographic systems. The most limiting factor is a lack of computer technology.

Oceanography has progressed well due to its importance to offshore petroleum exploitation. China has conducted seismological surveys of potential oilbeds. Seismological equipment, however, is generaly inferior to that of the West. In the area of oceanographic studies, research related to offshore oil development is ongoing. China has expressed a need for foreign technology and expertise in this area of applied science as a whole.

The Chinese are strong in the areas of climatology and meteorology, although gaps remain in the field of numerical prediction. This is due to a deficiency in computer capabilities rather than scientific expertise. Great improvements are expected when better mainframes, peripherals (especially graphics terminals), and software become accessible.

# BUSINESS GUIDE

## 1. THE BUSINESS ENVIRONMENT

Although Canadian firms have achieved some major successes since the Open Door Policy began, trading with China is now recognized to be a more complex and lengthy process than most people anticipated. China has not simply opened her doors for trade, but is negotiating all purchases and contracts according to a strict set of plans and objectives. This fact, the huge cultural differences between China and the West, and the complexities of China's Foreign Trade System, are factors which necessitate commitment to a long term effort on the part of foreign firms seeking to enter this market.

Not all firms are encouraged to consider doing business with China. Those who have not previously exported are advised to try selling in a simpler business environment first, such as the U.S. But, for firms looking to increase sales beyond North American markets, China is a logical region in which to expand.

Over the next five years, the constraints to doing business here are expected to ease considerably. We can expect to see improvements in China's foreign exchange reserve situation. Living standards and hence, purchasing power are expected to continue their steady rise. As well, a more comprehensive legal framework and streamlined bureaucracy should exist to better accommodate foreign investment.

But, firms are advised not to wait for these improvements. In view of the long process of trust-building which the Chinese emphasize in their business relationships, experts are claiming that if steps are not taken early enough, the market may be too crowded later on. In those areas where Canada has strong comparative advantage, Canadian firms should carve out their share of this market now.

### A Complex Bureaucracy

China's highly centralized bureaucracy dominates the economy and culture right down to the grassroots level. This bureaucratic system is the largest in the world and, by China's own admission, is complex and inefficient. Westerners often lack understanding of Chinese bureaucratic procedure - especially the decision-making mechanism. This can be a severe disadvantage in negotiations.

While recent administrative reforms have simplified bureaucratic procedure to some degree, the process of contact, communication, and negotiations can be long and frustrating, especially if a firm goes through all the proper bureaucratic channels. To be successful , companies should develop and maintain contacts with Party, State, and Municipal officials who can assist their efforts.

## An Immature Legal Framework

Over the period 1949-79 China's laws and regulations served administrative purposes only. With gradual economic liberalization and the new freedom to contract, a body of law oriented more to the needs of private industries is now emerging. Rapid steps are being taken to adopt international commercial law and procedures.

Generally, however, the dispute mechanism remains one of conciliation and mitigation. The services of Chinese lawyers are still mainly oriented to administrative interests rather than those of private clients. For this reason, Canadian companies are advised not to engage their services.

## Cultural and Linguistic Differences

Culturally, problems can arise out of discrepancies in language interpretation, body language, and differing views about what is considered impolite.

The problem of language persists since there are not enough English-speaking personnel in China to meet the demands of the trade and commercial sectors. And, despite the presence of a good interpreter, Western firms still encounter communication problems during negotiations, since many English technical terms have no equivalent in Chinese.

## The Information Gap

A major obstacle most Canadian firms find they must overcome is the fact that Chinese officials are generally unaware of the extent and nature of their capabilities and experience. Communicating this information, in the technical detail China requires, can take time.

Canadian companies may also have difficulty accessing important sources of information about developments in China. English language versions of some Chinese publications are available, but these cannot be relied on to convey realities expressed in the original versions.

## Trust-Building: A Time-Consuming Requirement

It is extremely important that companies express their goodwill and cultivate an atmosphere of trust before initiating any negotiations. This is the requirement for success most often quoted by Western firms who have done business in China.

China's insistence on this is partly due to cultural differences between the East and West. Mutual trust is however a common criteria in business practices among Overseas Chinese throughout Southeast Asia, to the extent that written contracts are seldom required.

For many firms, trust-building extends the period required to get a first contract to two or three years, (although some have been successful in shorter time periods.) But Canadian firms are advised to be patient. The Chinese are accustomed to a supply and demand situation where good relationships are the only assurance of supply. Firms who set the stage for a long-term relationship will become China's preferred business partners.

## 2. SOME CONSTRAINTS AND ADVANTAGES TO CANADIAN ECONOMIC COOPERATION WITH CHINA

### THE CONSTRAINTS

### Canada's Trade Policies

Like other developing countries, China's ability to earn foreign exchange through export sales is a major determinant of the pace of development. In recognition of this, in early 1980, Canada granted China General Preferential Tariff treatment. This reduced the rate of duty for approximately 20 percent of China's annual total sales to Canada.

The benefit of this overall tariff reduction to China is lessened by the fact that China's dominant exports to Canada - textiles and clothing - were excluded from this agreement. These items are leading foreign exchange earners for China.

The Chinese prefer a situation of balanced bilateral trade with individual trade partners, yet their current deficit with Canada stands at 6:1. Citing restrictions on China's textile and clothing exports to Canada, Beijing recently indicated that unless their trade deficit improves, future levels of bilateral trade with Canada could be negatively affected.

Canada's export policies can also restrain our trade with China. For example, in Canada's forest sector, there is a focus on increasing the proportion of semi-processed and manufactured products in total wood exports. This policy may constrain the level of processed forest products Canadians can sell to China as China's strong demand for raw log imports is expected to remain high. Our sales of lumber may be predicated upon our sales of logs.

### Export Controls

Until recently, Canadian export controls presented a small obstacle in some sectors. Exports to Communist countries of high technology products and machinery which have potential military and strategic applications, are licensed under Canadian procedures and the COCOM agreement.

Following consultations in December 1985, Canada now approves exports to China of certain types of machine tools, semi-conductors, test equipment, lasers, computers and telephone exchanges - in all, more than 20 categories of strategic goods that no longer need prior unanimous approval of COCOM.

## Alternate Forms of Business and Trade Arrangements

China strongly emphasizes the use of alternate forms of doing business and conducting trade. Mechanisms such as countertrade, cooperative production arrangements, and joint ventures, enable Beijing to conserve foreign exchange and still maintain economic cooperation with other countries. Such alternate business arrangements are growing in importance worldwide. Barter and countertrade are preferred methods of trade for Third World countries which do not have the cash to pay in hard currency. This growing trend in trade with developing countries is even more necessary for China since the Chinese currency is not widely traded.

Since 1979, Japanese and Overseas Chinese companies have moved rapidly to establish compensation trade contracts. Hong Kong-based companies dominate joint venture activity in China's four main Special Economic Zones. For Canadians, however, such arrangements are still novel forms of doing business. This is evident by our relatively low participation rates in joint ventures, compensation trade and cooperative production arrangements with China.

A dominant constraining factor for Canadians is our general unfamiliarity with the processes of cooperative production, countertrade, and joint ventures. For this reason, Canadian firms are strongly advised to develop in-house knowledge of these trade mechanisms. Firms who organize themselves to make such arrangements possible will increase their overall export competitiveness both in China and other overseas markets. (NOTE: The Canadian federal government and the Canadian Export Association have been jointly sponsoring seminars on barter and countertrade which instruct Canadian exporters how to handle the demands of these techniques.)

## Underutilization of the Trading House Sector

According to a recent study conducted by External Affairs, Canadian exporters seriously underutilize the trading house sector in their efforts to open up new markets overseas. The level of trade handled by Canada's trading house sector is significant, but could be much greater. At present, it handles approximately 13 percent of all Canadian exports, but more significantly, in non-U.S. markets, it handles 40 percent of all Canada's exports. Within the Pacific Rim, much of this export activity occurs with countries who strongly emphasize countertrade arrangements with their foreign partners.

Canada's trading houses specialize in overseas markets - mainly Japan and other Asia, including China. Most offer a wide variety of services including financing, international marketing consulting, and management consulting. Further, the sector as a whole, possesses a signficiant and useful worldwide network.

Canadian manufacturers and producers should not allow their unfamiliarity with trading houses to continue to constrain their activity in both China, and other markets within the Pacific Rim. Small and medium-sized firms who have limited resources with which to pursue new overseas markets should view this sector as a viable option. Its presence abroad is a resource which can help overcome the sometimes considerable risk and high entry costs involved in opening new markets such as China.

In the context of countertrade, the relatively smaller size of Canada's domestic market naturally limits the scope for Canadians to enter into such agreements since we have a low capacity to absorb foreign-made products. But countertrade arrangements handled with the assistance of a trading house immediately become more viable since this facilitates the sale of Chinese products on other foreign markets, as well as in Canada.

To obtain more information, firms should contact:

The Trading House and Countertrade Division
Export Programs and Services Bureau
Department of External Affairs
125 Sussex Drive
Ottawa, Ontario
K1A 0G2
Telephone: 613-996-1419 or 613-996-7182
Telex: 053-3745

## Financing

In 1979 Canada extended a $2.3 billion line of credit to China to finance purchases of Canadian goods and services. Since then, China has utilized only about $.6 billion of this, and has indicated the terms are not competitive enough.

Export financing offered by the Canadian government is governed by OECD concensus rates. Our strongest competitor in this area is Japan, which often provides concessional financing to China. The Japanese have been known to extend credit to China at terms as low as 3-4%. In instances where Canadians are not the only suppliers of goods and services China needs, the issue of project financing presents serious constraints. China is one of the most interest-sensitive markets with respect to exports and project financing in the world, and Canada can expect to face mounting competition not only from Japan, but the U.S. and Western Europe as well.

### China's Lack of Awareness of the Abilities of Canadian Firms

There has been a tendency on China's part to regard Japanese and American firms as being on the leading edge of most technologies. Canadians have succeeded in altering this perception considerably over the last five years, and China has recognized Canada's strong competitive position in important areas of industrial development. Nevertheless, Canadian firms find that many key officials in China are unaware of the extent of Canadian companies' capabilities and experience. This necessitates repeated contact with China's trade corporations in order to convey detailed technical information about the firm's product or service.

Increased Canadian representation in China is contributing to greater awareness of Canadian capabilities, as are other forms of government assistance such as trade missions, and official government functions. Thus, as Canada's economic cooperation grows, this constraint is expected to diminish.

## ADVANTAGES

### Canada's Strong Competitive Position

Canada holds a strong competitive position in many areas which are China's priorities for development over the next 10-20 years. Canadians can make solid contributions to China's modernization in fields such as agricultural mechanization, animal husbandry, ferrous and non-ferrous metals mining, forestry and related industries, oil and gas production, hydro power development, coal and nuclear power development, telecommunications, micro-systems, earth station technology, and computer technology.

Canada's advantage in these priority areas exists in part due to the strong similarities both countries have encountered in economic development. Both have required transportation and communications systems over vast distances and difficult terrain. Both have required more efficient energy development and use. Both have found it necessary to utilize and adapt advanced technologies to meet the needs of development.

Prospects for economic cooperation between Canada and China appear promising as these crucial areas of China's development are being upgraded. While it is true that overall, Japan and the U.S. dominate foreign trade and investment with China, Canada's expertise within these industrial sectors provides a solid base for the creation of permanent niches in this market.

## Better Prospects for Canada's Small and Medium-Sized Firms

Small and medium-sized companies are the backbone of Canadian industry. Yet the Chinese market has presented serious constraints to these firms. For example, most do not have the financial and personnel resources necessary to establish themselves in China. As well, their predominant export experience is in the U.S. - a relatively simple and traditional market. These constraints are lessening, however, and the potential for smaller firms to do business in China at this time appears very good.

Like most developing countries, China is unable to absorb large amounts of foreign capital and technology to upgrade industry. Infrastructural support to major projects is still limited and there are other limiting factors such as the generally low educational levels of most Chinese personnel. Therefore, the Chinese are pragmatically concentrating on the gradual upgrading of existing facilities. This strategy has opened up good opportunities for Canada's smaller companies, a fact evidenced by China's increasing business activity with smaller firms. There is a growing recognition that Canada's smaller firms have the technology China needs now.

To help these firms overcome the financial and other barriers to trade with China, both the Federal and Provincial governments have increased their assistance to business. Financial resources to fund market potential exploration visits to China are available through CIDA and the Program for Export Market Development. Additionally, there is an effective and ongoing Trade Mission program between the British Columbia provincial government, the Canadian federal government, and the government of the People's Republic of China.

Important services to smaller firms in China also include trading houses. This sector has the potential to become a crucial vehicle for Canadian products to reach China's market, and offshore markets in general. Small and medium-size exporters should not hesitate to explore the potential for export development available through trading houses. (Japan's use of organizations similar to trading houses is credited with much of their success in China.)

## China's Policy of Supply Diversification

In order to ensure that no single country dominates modernization in specific industrial sectors, China has adopted a policy of supply diversification in its trade practices. According to this policy, monopoly power among suppliers is undesirable. Thus, the award of contract bids is not always limited to the lowest bidder, nor to countries whose trade balances with China are most favourable. This policy assists in risk avoidance and assures that China receives the best mix of products, technologies, and partners.

For Canada, this policy may alleviate the negative impact on China's trade decisions posed by our trade surplus. Further, even in areas where Japan and the U.S. dominate China trade, Canada's market share may be assured.

Industrial sectors where supply diversification is in effect include China's offshore oil exploration, where the award of contract bids was not limited to the lowest bidders, and coal exploration and extraction, where U.S., U.K., West German and Japanese companies all participate.

## Effective Government Assistance

In the context of market entry to China, government services are both useful and necessary to all foreign business. Since, in China, enterprises and industry are extensions of the State, rather than private entities, the tendency is for Chinese officials to recognize and trust foreign governments more readily than they do private companies. This fact has created tremendous scope for governments to cooperate with business in opening up China's market.

Important success factors for Canadians in China are the major, dynamic roles the Federal and Provincial governments play in promoting trade and investment. Since 1979, Canadian government assistance to investors and exporters in China has greatly expanded. Resources at both federal and provincial level include extensive general information services, financial assistance, trade missions, and assistance in communication and representation to the Chinese Government.

## WORKING AROUND THE CONSTRAINTS TO TRADE

Since, in general, the trend is toward increased bilateral trade between Canada and China, Canadians should seriously consider trading with China, using strategies which enhance our position of advantage. A successful strategy will be based on recognition of the dominant role the U.S. and Japan play in the market. Capitalizing on strengths outlined in this discussion, Canada can forge a niche in the market based on our specialized areas of expertise, and natural comparative advantages.

It is important for Canadians to remain flexible, not only in terms of the products and services we sell to China but towards questions of financing and methods of payment. Since China's continued success in bilateral trade with Western countries depends on the ability to develop exports and earn hard currency, we must increase imports from China. In addition to selling to the Chinese, Canadians should participate in counter-purchase and import agreements. Partnerships and agency arrangements with Chinese exporters also deserve consideration. Both countries could benefit if Canadians were to promote and expand Chinese exports in sectors which are free from quotas or anti-dumping restrictions.

China's reluctance to utilize foreign commercial credit may be a reflection of its cautious adjustment to increased levels of foreign trade. As the country's ability to earn foreign exchange increases, Beijing's attitude toward import-financing may change. Meanwhile, Canadians can offer non-finance-related negotiating benefits which appeal to China. For example, technical assistance is highly valued. Contracts in which training is provided without explicit charge are considered favourably. Many Chinese personnel have already been trained on location or in plants in foreign countries. Similar innovative approaches to potential business arrangements with China can make a great difference to the outcome of negotiations.

## BUSINESS GUIDE

### 3. GUIDE TO MARKET ENTRY

The removal of constraints to business endeavours in China requires intergovernmental measures. Since this is a gradual process, foreign businesses need to make sustained efforts. The following are some suggestions concerning market entry. Flexibility, an understanding of China's needs, and an emphasis on the long term are essential.

### 1) Research the Market

It is imperative that firms considering trading with China devote time, money, and human resources to identifying exactly what it is the Chinese want. For example, be aware China will not import for the purpose of simple immediate consumption. Its foreign exchange reserves are earmarked for investments which will yield a stream of benefits over the long term. Improvements in the domestic standard of living (and corresponding increased domestic consumption) are planned to coincide with China becoming competitive in international markets.

Modernization involves building up domestic industry to supply not only the domestic market but export markets as well. To accomplish this, China is importing raw materials in short supply at home, and prototype technology and expertise. This import program is financed in ways which involve the least drain on foreign exchange. Economic cooperation with Canada, therefore, is unlikely to involve outright purchases of fully manufactured products unless they contribute to current goals and are accompanied by agreed upon methods of financing.

In this context, it is essential to have a sound knowledge of China's modernization goals and the needs of the economy. This is not only vital to the process of a firm's product definition but is equally important at the negotiations level, where the contribution of your product to China's development will be strongly allied to price considerations.

The rapidly growing number of trade fairs can be an important source of information about China's needs. These fairs are well attended by Chinese officals and businessmen from around the world. Although somewhat expensive because of the physical and cultural distances that must be overcome, they provide important exposure and experience. Financial assistance to Canadians attending trade fairs is available through the Program for Export Market Development. Invitations from the Chinese are sometimes required, but these can be obtained fairly easily if there is a high demand for the product.

## 2. Utilize Government Assistance

Foreign governments are playing a greater role in assisting trade and investment with China than is usually the case in overseas markets. In fact, their role in helping to develop this market is crucial to the success of many firms in China. Companies who do not obtain some assistance from government can be at a disadvantage. Thus, government assistance should be a key aspect of your market entry strategy.

Most of the major western governments have recently increased their resources to assist economic cooperation with China. In Canada's case, support to Canadian business now includes greater informational and financial resources, frequent federal and provincial government contact with key Chinese officials, and greater Canadian representation in the regional offices of Beijing, Shanghai (to open in 1986), and Hong Kong.

The Provincial Ministry of International Trade and Investment has increased assistance to firms interested in trading with or investing in China. The Ministry organizes trade missions, coordinates the activities of incoming Chinese delegates, and provides advice on matters pertaining to trade and investment.

Introductions to relevant Chinese officials by representatives of the Canadian federal or provincial governments can enhance a firm's credibility in China. The Chinese rely heavily on foreign governments for introductions and information about overseas companies. For this reason, interested companies are advised to contact both External Affairs (in Ottawa) and the Ministry of International Trade and Investment (in Vancouver) and ask to be placed on the appropriate list to meet incoming Chinese delegates.

Trade Missions and technical seminars are an even more effective way for firms to enhance their contacts with relevant Chinese officials, especially at the decision-making level. Both the British Columbia government and the Canadian federal government have excellent trade mission programs in place to effect greater contact between Canada and China - among professionals, administrators, academic institutions, and the business communities.

The Canadian International Development Agency and the Export Development Corporation are two other organizations prepared to assist Canadians in introducing their products and expertise to China. Under the new general financing protocol with the Bank of China, the EDC can finance up to 85 percent of a contract price for Canadian capital goods and related services. Exporters are encouraged to contact EDC to determine whether or not their proposed sale is eligible for EDC financing. The EDC also provides insurance services to support export and investment efforts in China.

Interested firms should contact:

The Export Development Corporation
Western Regional Office - Vancouver
(604) 688-8658

EDC's Ottawa Headquarters:
(613) 598-2500

Firms are also advised to explore the assistance available through the Canadian International Development Agency (CIDA). The Agency can be a key route to business in China.

CIDA's assistance to Canadian business in China is based on the policy that the Agency's long-term commitment to China's development can and should further Canadian economic cooperation with China at the same time. This is a priority for Canada, as well as for China.

Under CIDA's new Industrial Cooperation Program (INC), the federal government makes funds available to the private sector to investigate and launch trade and development opportunities. In China, the emphasis of this program is on technology transfer, and technical assistance, rather than on large capital projects. Funding is available to private Canadian companies for:

1) Starter Studies: the maximum amount available is $15,000 to cover preliminary negotiations, travel costs to China, and initial probing of the market.

2) Viability Studies: the maximum amount available is $100,000 to fund more in-depth studies and costs incurred during serious negotiations with the Chinese, with the goal of obtaining a signed contract.

3) Technology Testing: CIDA will fund up to 75 percent of the total cost of testing a proposed technology to be used in a joint venture.

4) Project Support: the maximum amount of $250,000 is available to offset costs incurred in a project's early operating period for firms working in a developing country.

5) Canadian Project Preparation Facility: the maximum of $350,000 is available to assist a Canadian firm in undertaking a feasibility study for a capital project. The firm must meet certain criteria including: possibility of the project's downstream implementation once feasibility is completed, good developmental impact in China, and possibility for sales of Canadian goods and services associated with project implementation.

### 3) Consider Using an Agent or Consultant

An important aspect of the Canadian experience in China has been the use of agents. In a recent survey, 43 percent of Canadian firms polled used Chinese-speaking agents based in Hong Kong or Singapore to represent their interests to the Chinese government.

A Chinese-speaking agent can be useful, particularly for small or medium-sized firms which cannot sustain high market entry costs. Many "Overseas Chinese" have useful contacts in China, such as relatives or friends who hold key positions in the State bureaucracy. Their contacts can be a source of useful information about projects currently being developed and about specialized areas of expertise needed in China. Since the process of communicating through the Foreign Trade System alone can be long and involved, such direct access to current information is an obvious asset.

Most Chinese-speaking agents are familiar with China's negotiating methods. This can make a tremendous difference to the outcome of negotiations. Apart from the obvious contribution agents make through their interpretive services, their ability to "read between the lines" can speed negotiations, and help Western firms avoid social blunders.

Give consideration to employing an agent who is based in Hong Kong, or one who travels extensively in China on a regular basis (many do). Their proximity to business activity in China will contribute significantly to reducing costs associated with communication and travel. For example, a significant proportion of investment activity in the four main Special Economic Zones originates from Hong Kong, and the colony is an excellent source of current information (i.e. the media, word of mouth) about ongoing business activity on the Chinese Mainland.

Consultants can also be helpful to firms wanting to know how to make initial contact with Chinese institutions (such as the China International Trade and Investment Corporation, the Ministries, or the Foreign Trade Corporations concerned) and procedures to follow in presenting a proposal. Their role becomes more limited once the preliminary stages of communication are over and serious negotiations are taking place.

### Hong Kong - An Advantageous Location

It may be cost-efficient to utilize other resources based in Hong Kong as well. The port has become a leading "paperwork" centre where lawyers, accountants, financiers, and entrepreneurs meet to negotiate, and transmit contractual relations and information. Hong Kong serves as a language interface where documents can quickly and accurately be translated into Chinese.

The former colony is also a convenient location for China's officials to meet with foreign counterparts rather than, or in addition to, meetings on the Mainland. Since 1980, many Chinese authorities have set up offices there for this purpose.

## Patience and Persistence are Crucial

Firms wishing to deal with the Chinese should be prepared to exercise great patience and perseverance. Since the start of the Open Door Policy, China's bureaucracy has been flooded with proposals and requests from companies all around the world. Only a limited number of trading corporations handle all China's import and export trade while simultaneously coordinating import demands and export programs for hundreds of production units. Thus, enquiries and communications to China often take some time to be assessed and processed.

Long, involved negotiations with the Chinese also take up company time. Part of the problem is that China's State-operating trading companies do not have the 12-month operating cycle common to Western firms. This makes for less pressure on officials to achieve results in a given period.

## How to Approach the Market

1) Identify the State corporation which handles the product in question. Firms may contact the Canadian Commercial counsellor in Beijing for assistance in this regard. (China's foreign trade is conducted exclusively through a network of State trading corporations. These are organized on the basis of commodities or services for which they are responsible. Foreign trade corporations (FTC's) conduct negotiations, draw up and sign contracts, and provide a link between the Chinese producers and the end users and foreign companies.)

2) A proposal should then be prepared and sent to the relevant trade corporation in Beijing. The form of the proposal is important as initial contact will influence future relations. The proposal should clearly define the product and be sufficiently explicit and technically comprehensive to allow the foreign trade corporation to seriously evaluate the product. Information about the firms' technical capabilities, experience, and other products should be included in the proposal. This information should be clearly distinguishable from the products, technology, or service the firm is promoting in China.

   China is likely to respond well to proposals which include the exchange of technical information and/or seminars to be given by the firms' technical people in Beijing. It is also useful to invite Chinese representatives to Canada to study the process, equipment, or technology in action. While the Chinese generally prefer to receive businessmen in their own country, an increasing number of Chinese technical and commercial delegations are being sent overseas.

Provide the foreign trade corporation with multiple copies of your proposal. These copies will be forwarded to the appropriate planning agencies, institutes, and manufacturing entities for review. Initial contact should include at least 15 copies of descriptive material for distribution among end-users and industrial experts.

Initial contact should also express your firm's willingness to provide further details and information, answer any questions, and meet with corporation officials in person. Separate proposals should be prepared if the product lines are handled by different trade corporations.

3) Copies of the proposal should also be sent to the Technical Exchange Department of the China Council for the Promotion of International Trade in Beijing.

4) Keep the Canadian Embassy or Commercial Office informed of your progress with the trading corporations by forwarding copies of all correspondence. Commercial officers meet regularly with corporation officials in Beijing and throughout China are therefore in a position to act on behalf of Canadian companies.

In the past, the decision-making process operated through a relatively small number of senior officials so that the buyer and seller rarely met. Recently, however, the foreign trade corporations are being bypassed. Business has been conducted through industrial ministries' Industrial Corporations, which buy and sell on behalf of factories under their administration. Provincial governments and municipal authorities have also entered into deals with outsiders. Individual enterprises, universities, and other customers can now contact foreign suppliers directly, especially to obtain technical information. The urban responsibility system and decentralization of authority have spurred foreign businesses to make direct contact with these other relevant Chinese organizations.

Direct contact at many levels of bureaucracy can be an extremely positive factor in communications with China. In this regard, it is worth noting that a number of firms have suffered from a lack of groundwork in their relations with the Chinese at the working level. Therefore, be sure that when you make your presentation, it is to the right people.

Proposals require time to be assessed and processed. Delayed acknowledgement or negative replies indicate only a lack of current demand for the product in question. It is important to be persistent in making the trade corporations aware of your company's capabilities as development progresses.

If the Chinese are interested in a business proposal, it will usually result in an invitation to the Guangzhou Trade Fair, if China is exporting, and to Beijing, if China is importing. Normally, the opportunity to begin serious negotiations begins at this point.

## Negotiations

Negotiations with the Chinese emphasize technical considerations and are extremely detailed. Until some form of trust has been established, negotiations are often particularly tough. The Chinese ask detailed questions and take careful written notes of the answers. While in Western countries, what is described or displayed in the course of negotiations does not necessarily have legal weight, the Chinese tend to place greater emphasis on verbal agreements, even in the preliminary stages of discussions. Foreign businesses are advised to conduct discussions with the Chinese in a systematic and well-planned way, employing advanced negotiation techniques.

NOTE: An excellent reference paper dealing with this subject can be obtained from the Canadian Manufacturer's Association. Its title is: Negotiating Contracts with the Chinese.

In negotiations, competition among overseas firms is often used by the Chinese as a bargaining tool to persuade firms to improve their offers. A number of firms have mistaken China's pressure to reduce their profit margins as a lack of understanding of the capitalist system. The Chinese, however, are simply utilizing their higher bargaining position due to the intense competition between foreign firms for access to their market.

Standard trade contracts are issued by the foreign trade corporations and printed in Chinese and English. (Each language is equally valid.) The Chinese insist on using these standard contract forms, which are designed to provide maximum protection to the trading corporations. The contracts are brief and straightforward, and strict adherence to their provisions is expected. It is advisable to insure that all the particulars of the agreement are included in the written contract. Contract terms generally conform to normal business practices and are acceptable to most Western businesses. Addition of new terms and alteration and deletion of existing ones can be negotiated. In general, however, foreign trade corporations are more willing to amend their import (purchase) contracts than their export (sales) contracts.

Contract disputes may arise, and, when this occurs, the Chinese prefer to settle claims by consultation and agreement between the parties to a contract. If consultation fails, the contract normally specifies that the dispute be referred to arbitrance.

## Some Technical Considerations

Payments for exports to China are made by an irrevocable letter of credit. The letter is opened by the Chinese buyers or their principals through the Bank of China in favour of the sellers. These sellers are advised through a Canadian bank with payment made on presentation of documents to the issuing bank, usually the Bank of China. The People's Republic of China does not follow the accepted international practice of having its credits confirmed by a bank in the seller's country.

The Bank of China, however, has a well-established reputation for scrupulousness in fully and promptly honouring its commitments. Documents are usually negotiated in China by the exporter's Canadian bank.

The terms regarding imports from China generally specify payment by confirmed, irrevocable letter of credit without recourse, with payment in a Western currency, generally U.S. dollars, pounds sterling or Swiss francs. The letter of credit may be negotiated through the Bank of China against presentation of documents. In some cases, the Chinese trading corporation will accept payment by confirmed letter of credit through the Bank of China in London or Hong Kong.

Some contracts may be negotiated in Chinese currency (Rmb). All major Canadian chartered banks have made arrangements with the Bank of China to handle Rmb accounts. In most cases, only the commercial invoice is required as documentation. It should list the FOB value and freight, insurance and other charges as separate items.

In the past, Chinese policy has been to negotiate important contracts on either a cash or deferred-payment basis. Payment in cash usually involves a small percentage (10 percent) on signing of the contract, the major portion (80 percent) on presentation of shipping documents, and the balance on commissioning of the equipment or expiration of the warranty.

China, as a general rule, will not accept buyer's credit extended by foreign governments or banks. Any contract that involves deferred payments will require that the exporter arrange his own financing.

## Patents and Protections

Canada has signed a trademark agreement with China but this agreement does not guarantee patent protection. The Chinese have agreed to extend industrial property rights protection, but this must be negotiated on a contract-by-contract basis. China enacted a patent law, effective April 1, 1985, that conforms to international practices.

Details concerning custom duties, import licensing, documentation regulations, and exchange controls are too lengthy for adequate description in this report. It is recommended that firms seriously considering trade with China familiarize themselves with these subjects. Various Federal and Provincial Government agencies can provide the necessary details and information.

* * *

Even if an initial negative response should be received from China's Foreign Trade Corporations, firms are advised to maintain a program of ongoing contact with key officials. Perseverance is an important component in the market entry strategies of the majority of successful firms who are now expanding their business relations with China.

## 4. MODES OF COOPERATION BETWEEN CHINESE AND FOREIGN BUSINESSES

China has promoted and developed a number of mechanisms for conserving foreign exchange and attracting foreign investment and expertise. It is important to distinguish between these mechanisms because they govern levels of commitment, investment, control and returns.

The nature of the business or contract in question will very much determine the possible type of trade arrangement. Reserves of foreign currency are generally spent on high priority items. Different forms of payment may be applied for other transactions.

### Compensation Trade (product buyback)

In this type of arrangement, the foreign seller provides services and production equipment and receives as payment the items produced (e.g. textiles may pay for textile machinery). Payment may also be in the form of hard currency from a third party who has been successful in selling the products outside China.

### Countertrade (barter)

This form of trade provides more flexibility than a compensation trade agreement since there is no direct relation between equipment supplied and goods/commodities repaid by the Chinese. But it can be difficult to arrange because of problems related to inter-sectoral coordination and China's reluctance to barter foreign exchange earning commodities for others of less "hard currency" value. The term applies to a range of transactions in which the importer's potential purchase depends on a reciprocal purchase by either the exporter or a third party acting on his behalf. In China, the issue of countertrade usually arises in the context of joint ventures or cooperative production undertakings (discussed below).

China's import decisions concerning commodities and semi-finished materials are based on normal commercial considertions such as price, quantity, delivery, and financing. However, in the case of manufactured goods and purchases related to major projects, China insists that machinery and equipment also be state-of-the-art technology, be limited to items China cannot produce domestically, and (in order to secure the added benefit of acquiring the latest in manufacturing know-how) be produced in China by a joint-venture or co-production undertaking.

A special Countertrade and Trading House Division (TEH) was recently created at External Affairs. In the Federal Government, it is the focal point for meeting the needs of the trading house sector and the demands of countertrade. Its function is to help improve Canadian export performance, especially of small and medium-sized business.

## Joint Venture

In joint venture projects, a limited liability company is formed. Management of the enterprise is shared in proportion to the investment contributions of the Chinese and foreign partners. Foreign capital participation is required by law to be at least 25 percent. Capital contributions to a joint venture can be made in the form of cash, capital goods, industrial property rights, or other assets. The most common contributions from Chinese partners are land, labour, factory, raw materials, and, to some degree, cash. Upon expiration, the contracted duration of a joint venture can be extended through the mutual agreement of Chinese and foreign partners, with approval by the Foreign Investment Control Commission.

China's objective for this form of economic cooperation is the acquisition of new technology and management techniques that will promote technical upgrading and more efficient energy and raw materials usage. It is a crucial component of the State's recent move to open 14 coastal cities to foreign trade and investment.

In 1983 significant extensions were announced to the preferential treatment accorded to joint ventures in China. They include income tax exemptions in the first two profit-making years, and a 50 percent reduction for the following three years. Joint ventures were relieved of the obligation to achieve a foreign exchange balance, enabling them to sell more products to China's domestic market. Machinery and other equipment were exempt from import duties and entry procedures for resident foreign employees were simplied.

## Joint Operation (cooperative undertakings)

Similar to a joint venture, this type of cooperation usually involves construction projects between Chinese and foreign parties. China usually provides the land and labour while the foreign party provides the capital. The completed project may be run jointly or solely by China. Revenue is then used to cover operating costs and repay the foreign investment, while any profits are divided between the two parties in agreed proportions. On repayment of the original contribution (plus interest), the project comes under total Chinese ownership.

## 5. CANADIAN SUPPORT TO BUSINESS INITIATIVES IN CHINA

Canadian resources to assist business initiatives in China include the following:

- **THE CANADIAN COMMERCIAL CORPORATION (CCC)**

  The CCC matches foreign requirements with packages of Canadian suppliers, and provides various gurantees to the foreign buyer (government). Large and small Canadian firms may find the services of the CCC or one of the similar provincial Crown corporations indispensable for exporting goods and services.

- **THE EXPORT DEVELOPMENT CORPORATION (EDC)**

  The EDC provides federal export financing through loans, and loan guarantees, and provide export insurance and investment insurance. In August, 1979, the EDC set up a $2 billion line of credit to enable the Chinese to buy Canadian services and goods. This was renewed in 1984.

- **CANADIAN EXPORT ASSOCIATION**

  This association was formed for the purpose of furthering Canada's exports. It has a strong interest in promoting trade with Pacific Rim countries.

- **THE ASIA-PACIFIC FOUNDATION**

  Established in the summer of 1984, this Vancouver-based organization is expected to emerge as a focal point for Canada's wider interests in the Pacific Rim.

- **DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION (DRIE)**

  The Trade Directorate in every regional DRIE office is a wealth of information. Many publications, export trade and market analysis, and advice on all the federal and provincial government export support services are available. These offices, in every province, deliver programs such as the PEMD (described below).

- **THE PROGRAM FOR EXPORT MARKET DEVELOPMENT (PEMD)**

  The PEMD helps Canadian companies enter or expand foreign markets by sharing the financial risk associated with marketing the company's goods for services abroad.

- **CANADA-CHINA TRADE COUNCIL**

  CCTC is a private sector non-profit organization incorporated in 1978 to facilitate and promote trade between Canada and China.

- **THE PROMOTIONAL PROJECTS PROGRAM (PPP)**

  The PPP can help provide a showcase for Canadian exporters at an international trade fair by inviting interested companies to participate in a government-sponsored exhibit and sharing the costs of space rental, management, design and construction, shipping, and publicity. PPP is also responsible for the federal trade missions program.

- **THE CANADIAN INTERNATIONAL DEVELOPMENT AGENCY (CIDA)**

  China is one of the countries CIDA concentrates on most in the Asia-Pacific region. Its China program involves 14 projects in 4 major areas - human resource development, agriculture, forestry, and energy - and is part of the federal government's vigorous efforts to develop markets in the Pacific Rim.

For addresses, please refer to Appendix A.

## APPENDIX A
## CONTACT LIST FOR CHINA

### Federal Government Assistance

Export Development Corporation
P.O. Box 655
151 O'Connor Street
Ottawa, Ontario
K1P 5T9
(613)237-2570

North Asia Desk
Eric Siegel, Area Manager

Canadian International Development Agency
200 Promenade du Portage
Hull, Quebec
K1A 0G4

Industrial Cooperation Division
Robert Hamilton, Program Manager
Pacific, Asia, and China
(819)997-0561

Bilateral Program
Donald McMaster
Country Program Manager, China
(819)994-3420

Economic Development Corporation
Western Regional Office
(604) 688-8658
Ottawa Headquarters:
(613) 598-2500

The Trading House and Countertrade Division

Export Programs & Services
Department of External Affairs
125 Sussex Drive
Ottawa, Ontario
K1A 0G2
(613) 996-1419/996-7182
Telex: 053-3745

Department of External Affairs
125 Sussex Drive
Ottawa, Ontario
K1A 0G2

East Asia Trade Development Division - The duties at the China desk in this division have been divided acording to the following sectoral responsibilities:

C. Rick Mann,
Director
(613) 995-7575

Wayne Robinson, Deputy Director
(613)996-7582

Carolyn Buchan, China Desk
Officer
(613)995-8744

Jean-Yves Dionne,
China Desk Officer
(613) 996-6987

PEMD Funding
International Trade Development
Branch
Program for Export Market
Development (PEMD)
(613)996-8708

## Provincial Government Assistance

The Ministry of International
Trade and Investment
Robson Square
Vancouver, British Columbia
(604)660-4567

Contact: Stewart Hay

## General:

### Canadian Commercial Corporation

Tower B, 17th Floor
Place de Ville
Ottawa, Ontario
K1A 1E9

J.J. Pierre Stang
Manager, Overseas Group
(819)997-5266

### The Embassy of the People's Republic of China

515 St. Patrick Street
Ottawa, Ontario
K1N 5H3

Cao Yunzhang, Commercial
Counsellor
Chen Keqiang, First Secretary
(Commercial)
Shi Zhengyuan, Commercial
Attache' (613) 234-2718

### Commerce Section Chinese Consulate

3380 Granville Street
Vancouver, B.C.
V6H 3K3
(604)746-4021 Telex 04-54659
Jiang Qifa-Consul (Commercial)
Mao Weiming, Vice Consul

### Canada-China Trade Council

Suite 805, 199 Bay Street
Toronto, Ontario M5J 1L4

Michael H. Cochrane, Vice
Chairman & CEO
#805-199 Bay Street
Toronto, Ontario M5J 1L4
(416) 364-8321
Telex: 06-217598

Robert Q. Phillips
President
#2500 - 1066 West Hastings St.
Vancouver, B..C
V6E 3X1
(604) 688-1501
Telex: 04-51181

### Canadian Embassy in the People's Republic of China

10 San Li Tun Road
Chao Yang District
Beijing, People's Republic of
China
Telex: 22717 CANAD CN

Tel: 521475, 521571, 521724,
521741, 521684

Robert E. Pedersen,
Minister-Counsellor
(Commercial)
Gorden T. Keys, Counsellor
(Commercial)
Helen Keys, Counsellor
(Commercial)

### South China Trade Commissioner

Office of the Commission for
Canada in Hong Kong
11-14th Floor
Tower Oue, Exchange Square
8 Connaught Place
Hong Kong
Telex: HX 73391
Tel: 5-8104521
Cable: DOMCAN HONG KONG

Christine Desloges, Second
Secretary (Commercial) (covering
three southern provinces in
China: Guangdong, Guangxi, and
Fujian)

## China's Foreign Trade Corporations

### China Light Industrial Corporation for Foreign Economic and Technical Cooperation

Chairman: Wang Wenzhe
President: Hu Zongyuan
Address: 22(B) Fu Wai Da Jie, Beijing, China
Telephone: 894743, 892897, 895369, 890751
Ttelex: 22465 LIMEX CN
Cable: 6535 BEIJING (inland)
LIGHTIND (international)

### China National Non-ferrous Metals Industry Corporation

General Manager: Fei Ziwen
Address: 46 Dongsi St. W., Beijing
Telephone: 550316
Telex: 22461 MIEC CN
Cable: 5330 CNNC

### China National Metallurgical Import & Export Corporation

General Manager: Lin Hua
Address: 46 Dongsi St. W., Beijing
Telephone: 551228, 556345
Cable: 2250 BEIJING
Telex: 22461 MIEC CN
22604 MIEC CN

### China National Metals and Minerals Import & Export Corporation

President: Wang Yan
Address: Er Li Gou, Beijing
Telephone: 892376
Telex: 22241 MIMET CN
22190 MIMET CN
Cable: MINMETALS BEIJING

### China National Aero-Technology Import & Export Corporation

Chairman: Mo Wenxiang
President: Sun Zhaoqing
Address: 67 Jiao Nan Street, Beijing
Telephone: 442444
Telex: 22318 AEROT CN
Cable: CAID BEIJING

## Technological Transformation

### China North Industries Corporation

This corporation (NORINCO) is a comprehensive state enterprise combining manufacturing and trade. It accepts orders for special technological equipment.

Chairman: Yu Yi
President: Xu Xiangguo
Address: 7A Yuetan Nan Jie, P.O. Box 2137, Beijing
Telephone: 863471, 890581
Telex: 22339 CNIC CN
Cable: NORINCO BEIJING

### China National Technical Import Corporation

President: Xu Deen
Address: Er Ligou, Xijiao, Beijing
Telephone: 892116, 890931
Telex: 22244 CNTIC CN
Cable: 1199 BEIJING (inland)
TECHIMPORT BEIJING (international)

## Agriculture

### China National Seed Corporation

President: Guo Zhaoxiu
Address: 16 Donghuan Road N., Beijing
Telephone: 593619
Telex: 22233 MAAF CN CNSC
Cable: 4429 BEIJING (inland)
CNSE BEIJING (international)

## Energy

### China National Offshore Oil Corporation

General Manager: Qin Wencai
Address: P.O. Box 2118, Beijing
Telephone: 550231
Telex: 22186 EQUIP CN
Cable: 3113 CNOOC

### China Petro-chemical International Company

President: Chen Jinhua
Address: 2, 5th Block, Hepingli, Beijing
Telephone: 462429
Telex: 22655 CPCCI CN
Cable: BEIJING 4270

### China National Chemicals Import/Export Corporation

President: Sun Suochang
Address: Erligou, Xijiao, Beijing
Telephone: 891289
Telex: 22243 CHEMI CN
Cable: Sinochem Beijing

### China National Coal Development Corporation and China National Coal Import & Export Corporation

Chairman: Hong Xun
President: Li Lu
Address: 3 Donghuangsi Street, Andingmenwai, P.O. Box 1409, Beijing
Telephone: 461223
Telex: 22008 CNCDC CN
Cable: BEIJING 3561

### China Southwest Energy Resources United Development Corporation

Chairman: Gao Yangwen
Acting General Manager: Zhang Yinuo
Address: 16 He Ping Bei Road, P.O. Box 1425, Beijing
Telephone: 446670, 446671, Ext. 338
Telex: 22660 CNMCI CN

## Trust and Investment Corporations

### The China International Trust and Investment Corporation

Chairman: Rong Yiren
Vice-Chairman: Xiong Xianghui, Bi Jichang
President: Xu Zhaolung
Address: 19 Jianguo Menwai Dajie, Beijing
Telephone: 58180
Telex: 22305 CITIC CN
Cable: 0207 CITIC BEIJING

## APPENDIX B

### Hotels Beijing

| | |
|---|---|
| Beijing Hotel | Cable: BEIJING HOTEL 6531 BEIJING<br>Tel: 507-766 |
| Beijing Toronto Hotel (JINGLUN)<br>- Agent: JAL | Tel: 800-223-3418<br>Telex: 210012 JLH CN |
| Fragrant Hills Hotel | Tel: 285-491 |
| Great Wall Hotel<br>- Agent: Sheraton International | Telex 20045 (GWMBJ CN)<br>(GWHBJ CN)<br>Tel: 505-566 |
| Jianguo Hotel | Telex 22439 (JGHBJ CN)<br>Tel: 502-233 |
| Lido Hotel<br>- Agent: Holiday Inn International Reservations | Telex: 22618 LIDOH CN<br>Tel: 506688 |

### Hotels - Guangzhou (Canton)

| | |
|---|---|
| China Hotel | Telex: 44888 CHLGZ CN<br>Tel: 66888 |
| Dongfang Hotel | Telex: 44139 GDZFH CN<br>Tel: 69900 |
| Garden Hotel<br>- Agent: Peninsula Group | Telex: 44799 GCHTL CN<br>Tel: 73388 |
| White Swan Hotel | Telex: 44149 WSH CN<br>Tel: 86968 |

### Hotels - Shanghai

| | |
|---|---|
| Jinjiang Hotel | Cable: 7777 SHANGHAI<br>Tel: 534-242 |
| Peace Hotel | Cable: 3266 SHANGHAI<br>Tel: 211244 |
| Shanghai Mansions | Cable: 1111 SHANGHAI<br>Tel: 246-260 |

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